NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR JANUARY.

"Season of crackling nuts and pippins pale,
Of frosted cider and wild popping corn,
Of cheerful hearths with glowing embers piled,
Of honest labor in his blessed home.
* * * * * * * * *
O, Winter though thou bearest on thy brow
The tempest-scar and icy touch of death,
Still do I love thee, for beyond thee, Hope
A brighter world presents to reason's eye,
Where the Archangel sings his morning song—
The heavenly sky-lark at the gate of day."

American Seasons, by Jesse E. Dow.

JANUARY, with his icy hand, unfolds the portals through which we look, as it were, down the vista, and behold Winter, with its storms of snow and sleet; its snow-banks sparkling in the bright sunlight, or reflecting back the chaste glitter of the full orbed moon; its gaiety and its gloom; its merry sleigh-rides, rushing, with silver bells, over the polished road-way; its weary and worn pedestrian, buffeting the driving, drifting storm, and seeking a shelter which, perhaps, he shall never find short of another world; the happy farmer by his winter fire, surrounded by "wife, children and friends"—all these, in our mind's eye we see, with a hundred other things common to the season of *rest*, of festivity and mirth.

Yes, the season of rest—for, like night to the toil-worn man comes winter to the toil-worn earth:—faithfully has she labored from April to November—"seed time and harvest" has she given, and her abundance has been poured into the lap of man. Her night of rest has come, and in the glorious Springtime, will she arouse herself again, and again pour forth her abundance; and so shall it ever be, for the Lord said, "While the earth remaineth, seed time and harvest, and cold and heat, and summer and winter, and day and night shall not cease."

And while the earth thus resteth, the husbandman enjoys the fruits of his summer labor. He has something to do, however, besides eating and drinking and making himself merry, for Winter has her appropriate labors as well as summer, and not by any means the least is that *of study*. In the days of long ago, when the only knowledge possessed by the Farmer was that which he had learned from his father, and when asked why he did thus and so, it was sufficient justification to him to say, because the same was done by my father and my grandfather, no study was necessary. Farming then descended very much as the "good name" so happily expressed in the song,

"The farm that I now hold * * *
Was the same that my grandfather tilled.
He, dying, bequeathed to his son a good name,
Which unsullied descended to me,
For my son I've preserved it unblemished with shame,
And it still from a blot shall be free."

It is very well—excellently well—to have *a good name* thus descend, but to have an old wooden plow-share, that it would take three yoke of oxen to haul through ordinary tillage land, two men on the beam to keep it in, and a man with a hoe to follow, and turn over the sward, descend from generation to generation, *is not quite so well!* We are of those who believe in improvement, and we believe too, that most of the astonishing improvement that has been made in farming, within the past quarter of a century, is due to the improvement in farming utensils—especially in plows, cultivators and seed-planters—and to the many agricultural journals and books, which have sprung up all over Christendom, and we are not certain but among the "rest of mankind," and enabled practical men to hold intercourse with each other, though situated miles and miles asunder. Thanks! thanks to the mechanics, for their agency in the good work.

Yes, study is one of the—we said *labors*, perhaps *recreations* would be a more proper designation—but be it what it may, no man in these days can be a "tip-top" farmer without study; and while he studies he compares. To illustrate. A farmer plants certain land with corn; the crop does not answer his expectations. He supposed he had chosen the most proper soil, and had done all that he thought necessary to insure a good crop. What was the trouble? That there was a "screw loose somewhere" which had let the bottom out of that crop he was certain, but where, and how to find it is the question. The winter evenings come on, he says to himself, "now I will make a thorough examination of the *New England Farmer*, and my books, and see if I cannot ascertain what was the reason I did not get a better crop of corn off that ten-acre lot, that I took so much pains with last season."

So he proceeds to examine; he finds that certain kinds of manure are peculiarly adapted to certain formations of soil, while the same manures used on other formations, have little or no effect. "And this," says he, "is my error. I have not applied the proper manure to that particular soil; next summer I shall know better," and then profiting by his examination of the subject, he obtains one of the best crops in the vicinity.

We believe the prejudice which existed some years since against "book-farming" has nearly died away, and farmers have now learned that a man can no more be an excellent husbandman without the study of books, than he can be a Clergyman, Lawyer or Doctor.

We recently spent a few days at the house of a friend who glories in being a tiller of the soil. His barn was well filled with hay and grain—underneath was a large root-cellar, clean, ventilated, and lighted, and still another, new and warm, where his fat porkers were enjoying all the luxuries of hog-dom, among the fallen leaves, used-up horse-bedding, decayed weeds, &c., &c.; his house cellar was amply stored with as fine a lot of potatoes, apples, turnips, and other of the products of his land, as we have seen for many a day. Abundance was all around him; he had been successful even beyond his expectations,—and his farming was chiefly learned from books. We desired to write a letter, and so said to our friend. "There," said he, pointing into a room which many would dignify with the name of library, "is where I do both my writing and my studying; it is at your service." And there we found a comfortable writing-desk, with all the materials for writing, in the most perfect order, and directly over the desk a large book-case, holding, say, from one to two hundred volumes of the best books on farming that could be procured. There was no mystery in our mind why our friend was a successful farmer. Those books told the story.

Although winter is the time for the farmer to study, it is also the time for him to make preparation for the coming Spring. If the handle of a plow happens to be broken, do not wait till the day comes for using it, before either mending it yourself or employing some other person to mend it for you. Winter is a capital time to repair broken tools, and no one can better appreciate the old adage that a "stitch in time saves nine," than the farmer.

We never shall forget the *tantrum* into which a farmer of our acquaintance once got, just for the want of a simple iron ring. He had a few tons of as good herds grass as any one would desire to see, just ready to go in, when the western heavens began to be obscured with the blackest kind of coming shower. All was hurry and bustle, of course, the oxen were yoked and attached to the hay-cart in double quick time, the men and boys were all on the *qui vive*, the rakes and forks were thrown on, and away all went upon the run, about half a mile, to the hay field. One large fork with which to pitch on the hay, was taken along, and none other at all suitable for that purpose. Tom was on the cart to lay the load, the stout hired man was to pitch on, and the farmer and one or two boys were to rake after. Two or three cocks were pitched on, and the prospect was fair that at least one large load would be got home dry, when lo, crack went the end of the fork handle, just as its holder was about heaving up a large forkfull, and while the handle went up with a jerk, the shining iron was left in the hay! The handle was split up about a foot,—and there stood our friend, looking the very picture of despair, while he exclaimed, "There now, didn't I tell you to go and get a ring put on to that fork handle before it was used again—didn't I, and why upon earth didn't you do it? And now, here we are, and every spear of this hay will be just as wet as muck before we can get another fork." We all did the best we could—but our main stay was gone—and the consequence was that up came the shower before the load was half on, and hay, men, cattle, and all concerned were drenched by one of the worst pouring showers it was ever our lot to be out in.

If that farmer, instead of trusting to Tom, Dick and Harry, to have that ring put on, had done it himself, he might have saved his hay dry, and we might all have escaped a soaking that, if it did not make any of us sick, might have done so, and entailed a physician's bill sufficient to purchase all the forks in a good-sized agricultural warehouse!

This, then, is one of the months in which to see that every pitch-fork has a ring on it to prevent it from splitting—every rake has all its teeth in—every hoe is well fastened to its handle, &c., &c.

Besides study and work, the farmer will find ample time to be merry, and to enjoy his winter holiday, and we wish *him*—we use the words as applicable to all our readers—A Happy New Year.

Our Initial Letter for January is indicative of an important item of business for the month. After an abundance of genuine, heart-felt good nature in the family, perhaps there is no one thing which adds more to its comfort than a plentiful supply of good fuel, well prepared, and conveniently housed. It sorely tasks the temper of the mother and daughters to be obliged to coax and puff and blow either wet or green wood into a generous flame, when the morning is biting cold, and the children are to be made ready for school, or the men to take an early start for the woods or the market.

It is a matter of economy, too, to burn dry wood. Now is the favorable time to set this matter all right.

CARE OF STOCK.—Constant and kind care of stock is something like frequent hoeing to a corn crop. The hoeing keeps the soil light, and susceptible of receiving valuable influences from the atmosphere, and thus saves manure. So frequent carding, and careful watering and feeding, saves hay and roots and grain, and gives you a larger product of milk and flesh than could be obtained on even a larger amount of feed, without the extra care. It is well to remember, too, that shelter and warmth supply the place of food, in some degree.

SHEEP.—Feed them on clover hay, if convenient, and make it convenient for them to go under cover at will.

CALVES.—Examine your cattle—but especially your last spring calves—and see if vermin have attacked them. If so, a little warm lard or oil rubbed close to the skin about the roots of the tail, the head and neck, will soon destroy them. Cattle cannot thrive while feeding a little army of depredators.

SNOW.—Bank the house well with snow and the wood-pile will last longer.

JANUARY—the Month of good wishes, new plans and new hopes—let us all start right in it, in every particular; the resolution of all so to do, may be wonderfully strengthened by a careful perusal of the Life of the late AMOS LAWRENCE.

SURFACE OF THE MOON.—The Earl of Rosse, who has recently completed the largest telescope ever made, alluded, at a late meeting in London to its effects. He said that, with respect to the moon, every object on its surface of 100 feet in height was now distinctly to be seen; and he had no doubt that, under very favorable circumstances, it would be so with objects 60 feet in height. On its surface were craters of extinct volcanoes, rocks and masses of stones almost innumerable. He had no doubt that if such a building as he was then in were upon the surface of the moon, it would be rendered distinctly visible by these instruments. But there were no signs of habitations such as ours—no vestiges of architecture remain to show that the moon is, or ever was inhabited by a race of mortals similar to ourselves. It presented no appearance which could lead to the supposition that it contained anything like the green fields and lovely verdure of this beautiful world of ours. There was no water visible—not a sea or a river, or even the measure of a reservoir for supplying town or factory—seemed desolate.

WIND AND RAIN.

Rattle the windows, winds!
Rain, drip on the pane!
There are tears and sighs in our hearts and eyes
For the life we live in vain!

The gray sea heaves and heaves,
On the dreary flats of sand;
And the blasted limb of the church-yard tree
Shakes like a ghostly hand!

The dead are engulfed beneath it,
Sunk in the grassy waves;
But we have more dead in our hearts to-day
Than the earth in all her graves!

Putnam's Magazine.

WATERBURY WILLOW ESTABLISHMENT.

Feeling a deep interest in the partial experiments now in progress for the introduction of the basket willow into this State, we recently paid a visit to the willow plantation of Mr. Erastus Parker, of Waterbury; and we confess our gratification of witnessing, not only the remarkable beauty of his growing crop, but the completeness of his triumph in demonstrating the practicability of adding this profitable crop to our other Vermont products.

Mr. Parker's plantation consists, at present, of about four acres, located on the banks of a small mill-stream. About one-eighth of this was planted two years ago last spring, and is now burdened with its third crop, which stands, on an average, perhaps six and a half feet high, and will yield at the rate of three tons per acre. Two acres were planted one year ago, the willows being about five feet high, and yielding a ton and a half per acre. And the remaining nearly two acres were planted last spring, the willows only reaching the height of three or four feet, and not being generally used for any other purpose but for cuttings for planting, with which Mr. Parker proposes, at a moderate price, to furnish all who are desirous of going into the culture.

The lowest market price of the willow is now $130 per ton, and the whole cost of cultivation, gathering and preparing for market, does not exceed $30 per ton, and with the aid of Mr. Colby's successfully operating peeling machine, this can be done for much less. Indeed, we have become satisfied that an acre of willows, at least, after the first planting, can be produced with very nearly the expense of an acre of corn; while the profit, after the second year, as can be readily calculated by the above statement of what Mr. Parker has actually accomplished, will be ten fold greater than one could reasonably expect from one of the ordinary products.

The success, then, of the experiment for cultivating the basket willow in Vermont must be considered settled; and our farmers have only to avail themselves of the example now before them to realize profits of which before they had no conception. Much information, however, is needed before the business can be entered on understandingly.

Green Mountain Freeman.

For the New England Farmer.

TRANSPLANTING APPLE TREES.

THEIR MANAGEMENT AND PROFITS.

MR. EDITOR:—Knowing that you will accept communications for insertion in your paper that will be of interest to the farming community, I thought I would write and make a few suggestions under the above heading, from a little experience I have had in the business.

In the first place, all those who have it in contemplation to plant trees for an orchard, should select a good location, which should be land of a gravely loam, sloping to the south as near as can be, and if a little stony so much the better. Dig your holes for the reception of the trees, at least twice as large as will be occupied by its roots; a rod from the fence and a rod and a half to two rods apart each way in straight lines, according to the dimensions of the field. The trees to be planted should be of good size, two years from the bud, with handsome, straight trunks, and the limbs branching out four or five feet from the ground. It would be well to procure the best, as in the end they are the cheapest. With the help of an assistant to hold the tree in a perpendicular position, proceed to place the roots in a straight line from the tree; then put some fine mould underneath and around the small roots and fibres, leaving no place not filled up as it should be; and pressing the dirt gently down with the foot. See that the trees are set in straight lines both ways, so as to show some taste, as well as for profit; for there is something pleasing to the eye of a person passing by, to see them coming into line in several directions. After a person has set his trees he should take especial pains not to have them injured in any way whatever, when working his cattle among them, by breaking the limbs, jamming off the bark and disturbing the roots.

Having been to some labor and expense of purchasing the best trees and planting them, he should keep an eye on the best course to be pursued as regards their management. Now what is to be done to insure success? Why simply the observance of a few rules that must be strictly adhered to. First. the ground among the trees should be kept in cultivation *every* year with some kind of hoed crop; and be liberal in the application of some good manure, spread on and well worked in with the plow and harrow. The trees should be washed every year with strong soap-suds to keep the bark smooth and healthy and free from moss. I would here caution people against a wash for trees that I once used, which was from a recommendation I saw in some book or paper, and that was a pound of potash to two gallons of water. After I had washed about a dozen trees it had eaten through the skin of my fingers, and so I reduced it with more water. It also turned the bark of the trees white, which can be seen to this day.

Now as to the best time of the year to trim trees, there are as many minds as can be imagined. Some think the winter is the best, because they have more time to attend to it. That should not be any reason why we should take such a time for the work, as the bark gets discolored below the wounds occasioned by the removal of limbs, and induces decay. The time in my opinion to trim trees, is in the month of June, when the wounds will speedily heal, and be the least detrimental to the tree. Every one having young trees, should have a good pruning-knife and saw, so that when the proper time comes, he may give the tree its right shape and form, removing all limbs that may cross and chafe each other, giving it the form of an inverted umbrella as near can be.

When any one has planted an orchard, he should not get discouraged, but work with a will, and keep the ground in good tilth among the trees, as it is in the kitchen garden. He should not be satisfied with a few inches growth made in a year, but as far as lies in his power, make a growth of from one to two feet; and he will have the satisfaction in being rewarded for his labor at a day not far distant. No man can give too much of his time, or bestow too much care upon his trees. It is the great secret in bringing them to perfection. What satisfaction and delight it must be to the owner of an orchard in full bearing, to see his trees, reared by his own hands, bending under their loads of fruit, rewarding him for his toil and labor, in profit and pleasure!

In regard to the profits of raising fruit, it must be admitted I think, that it is more profitable than anything else a farmer can raise. The crops raised among the trees while they are growing, will more than pay the expenses of their culture; and after they have come into bearing, nothing need be done but to keep the ground plowed every year. The prices that good apples usually sell at, will keep in ratio with the population at least for the next half century.

J. UNDERWOOD.

Lexington, Nov., 1855.

REMARKS.—MR. UNDERWOOD is a good farmer, and understands the business he is discussing. If we mistake not he has taken some of the first premiums for orcharding in Middlesex County. Will he be kind enough to give us his reasons, why land "sloping to the south," is better than any other as a location for an orchard? The reader will not fail to observe the effect of a wash of potash water, even of the reduced quality of a pound to *two* gallons of water.

THE SENSE OF SIGHT IN BIRDS.

We copy the following interesting chapter, perhaps from the pen of Prof. De Vere, from *Putnam's Monthly* for November:

Audubon has written an amusing book, I had almost said of fables, called Ornithological Biography. By a number of cruel experiments, he has proved to his own entire satisfaction, and that of many others, that vultures are led to their food by the sense of sight alone; the sense of smell, which they were supposed to possess in an exquisite degree, affording them not the slightest assistance. His experiments prove quite too much for his purpose, for they equally deprive the poor birds in question of both sight and smell. It is certain that this bird possesses both senses in great perfection, and equally certain that neither nor both are the sole means it employs for obtaining its food. Though the senses in animals are the means of obtaining them food, they are not the sole means, as we very well know.

It is a most curious question, and well worth

more attention than it has ever yet received. For want of a better explanation, we usually say there is an instinct that enables animals to find their food. Many go from great distances directly to it.

In disputing about the comparative value of the senses of sight and smell in birds, authors notice a much more curious fact,—the great power birds possess of altering the focal length of their eyes. To see equally well an object at a distance of many miles, and a minute seed or insect an inch from the bill, may well amaze us. Observe the first person of your acquaintance you meet, who happens to wear spectacles. If he looks at an object near him, he looks *through* his glasses; if at a more distant one, *over* them. Go to a practical optician and desire him to construct an instrument that will enable you to do what birds are constantly doing in this, and he will, most likely, tell you the thing is impossible.

Man probably surpasses birds in extent of vision, as much as birds surpass man in sharpness. Ross, in his voyage to Baffin's Bay, proved that a man, under favorable circumstances, could see over the surface of the sea, 150 miles. It is not probable that any animal can equal this for extent. In sharpness of sight, on the other hand, birds greatly excel us. The eagle, soaring at such a height that he seems a mere speck, sees the grouse walking in the heather, which it so closely resembles in color as readily to escape the sportsman's eye. Schmidt threw to a considerable distance from a thrush a number of beetles, of a pale grey color, which the unassisted human eye failed to detect, yet the bird observed them immediately. Many birds readily perceive insects on branches where the sharpest sighted person can detect nothing.

The eyes of birds are remarkable for their great comparative size, the great convexity of the cornea, and for having the sclerotic coat formed anteriorly to a circle of bony plates. The optic nerves are very large, and unite so intimately as to appear perfectly incorporated. The iris is exceedingly contractile—as all may have observed who have watched a bird dying. Birds do not expire with eyes open, as is the case with man and the lower animals, and when they are expiring, you may readily observe the great power they possess of dilating and contracting the pupil. The muscles, as in man, are six in number—four straight and two oblique. in many birds the eye-ball possesses very little mobility, and in some of the owls it is so closely fitted into the orbit as to be immovable.

How the eye adapts itself to near and distant objects is one of the most abstruse questions in physiology. Three explanations have been offered. 1. By bringing forward the crystaline lens nearer to the cornea, without altering the form of the whole eye or the crystalline itself. 2. By changing the figure of the globe of the eye, so as to increase the distance between the cornea and retina, as you pull out the joints of a common spy-glass; and, 3. Without altering the general form of the eye, by increasing the sphericity of the crystalline, and thus increasing its refractive power. The first was the opinion of Haller and the earlier physiologists. The second, was adopted by Blumenbach and many able men. The third was the opinion of Lewenhoek, Descartes, and Dr. Young, and is, perhaps, the true explanation. Sir Everad Home and Mr. Ramsden performed many experiments to elucidate the question, but they proved nothing.

GEORGIC ABOUT TREES.

Extract from a "Georgic about Trees," read before the Young Men's Association at Elmira, N. Y., by Prof. EDWARD NORTH, of Hamilton College:

Trees furnish us with timber, fuel, fruit;
Yet not for this alone, I bless their suit.
They have their language, sympathies and voice;
With hearts that leap for joy they can rejoice,
And mourn with mourning hearts; if happy thought,
Or hope, or love returned, or good deeds wrought
With softest sunshine fill your soul and eye,
To all this sunshine woods give glad reply.
These joys, for which tongue hath no utterance,
Are voiced in music by the streamlet's dance;
Feeling that struggle at your lip for words,
From smiling trees are syllabled by birds;
Or should bereavement, pain, ingratitude,
People your breast with sorrow's sullen brood
Of wretched thoughts, and human accents rasp
Your wounded spirit, and the proffered grasp
Of friendship's hand seems icy cold and hard,—
With no such rudeness will your peace be marred,
When to the hushed and twilight grove you wend,
For friendship's self without the selfish friend.
From whispering leaves, and insect's hum, and grass
Fragrant beneath your footsteps there shall pass
Such soothing influence to your breast, that ere
Your griefs are told they turn to holiest cheer.

For the New England Farmer.

HONEY PONDS.

THE DAY OF HUMBUG STILL CONTINUES.

MR. EDITOR:—Not long since, seeing an advertisetisement in the *Travelter*, to the effect, that if any person would address a letter to Messrs. H. T. J. & Co., New York, box so-and-so, inclosing four postage stamps, by return of mail, Messrs. & Co. would inform the person, of a way by which they could make five or ten dollars per day, with scarcely any trouble, and without leaving home, &c., &c. To me the advertisement contained upon the very face of it all the elements of a perfect humbug. However, a young friend of mine, being out of health and wishing to find some method to occupy his mind, and if possible replenish his pocket, followed the directions of the advertisement; and, my dear editor, what was the result, think ye? You begin to laugh, I know you do; well, here it is, for the especial benefit of all young men out of health, and the would-be-humbugged public in particular. A circular was returned, in which the young man was informed that if he would again address Messrs. H. T. J., & Co., inclosing five dollars, they would inform him of a method to make *honey!!* as good, if not better, than any bee in the United States or anywhere else could do; indeed, bees could be dispensed with altogether, and their manufactory was attended with considerable trouble, and the bees themselves a nuisance about one's premises. A short extract from the circular:—

"One hundred and fifty per cent. can be made upon the sale of the articles, and that, too, when sold at a less cost than the honey made by bees. It can be made in small quantities for 6 cts. per lb. Upon the receipt of 25 cts., I will send you a small pot containing a sample of the honey made from this recipe, &c., &c. A man can make one hundred pounds in twenty minutes, with but very little trouble. The honey, as manufactured by the new process, has, also, the great advantage of being always fresh and in season—a thing utterly impossi-

ble in the material made by bees—and will keep for years." Indeed! honey by this new process, I presume, can be made to flow freely in streams to suit all over the land, and "the rest of mankind," for little or nothing. Every man who feels a partilce of philanthropy welling up in his bosom, can have a small or large—as to that matter—pond of it near his premises for the use of his household and the "stranger within his gates," to dip out of and satisfy his hunger, or his taste for *honey*, "manufactured by the new process," superior to that of the industrious and humble little bee. Verily the day of humbug is not yet, and what comes next—echo answers next. That a "fool and his money is soon parted" is as true now as in the day of the wise man.

King Oak Hill, Nov., 1855. TITYUS.

CRANBERRY CULTURE.

Many a sensible housewife has adopted the very sensible opinion that *preserves* made sufficiently rich to keep throughout the year, are but poorly adapted to *preserve* the health of those who swallow them. Cranberries, on the other hand, are fast gaining in public favor, as an article easily kept in its natural state, quickly done up for an occasion, and affording an agreeable acid, not *injurious* but *beneficial to health*. Hence, the increasing demand for them; and hence the probability that the price will not fall in proportion, as the supply increases, but that the consumption will keep pace with the supply, and remunerating prices be maintained; and hence also, a reason for copying the following from the able report of CHARLES L. FLINT, Esq., Secretary of the Mass. State Board of Agriculture.—*Nash's Farmer.*

"The cranberry may be propagated from the seed, or from cutting, or by transplanting. The first crop obtained from planting the seed will, ordinarily, be a year or two later than that produced by wild plants transplanted. It is, therefore, found to be more profitable to transplant, except in one or two sections of the State, where the interest in transplanting has been so great that $10 a square rod is not an uncommon price for plants, where the ground is thickly covered.

Where it is desired to propagate by slips, or cuttings, the usual practice is to gather a large quantity of vines, and run them through a common hay-cutter, until they are reduced to the length desired—an inch or so—when they may be sown broadcast, and harrowed in; though it is considered best, on some accounts, to sow in drills, and cover properly. These slips very soon take root, starting from the base of the leaves, and shooting up many rising branches.

In case of cranberries growing wild, it is a common and well known practice to flow or cover them with water, during the winter and early spring. This is very desirable, if the situtation is such as to allow it, though it is not generally considered essential by those who have been most successful. It is often useful where there are facilities for flowing, to let the water remain a few inches deep till the spring is well advanced, (some think till the first of May, or even later,) to retard the blossoming till there is no danger from frosts. Facilities for flowing are desirable in the *cultivation* of cranberries also; and if the plantation could be so arranged as to flow very quickly, it might be of essential service, occasionally, during the spring and autumn.

As the cranberry, in its natural state, is more frequently found growing in a low, wet swamp or marsh, that kind of land is generally selected for its cultivation. The mode of setting out the cranberry in such a swamp, if we suppose it to be covered with bushes and grass and surrounded by a sandy soil, or in the immediate neighborhood of sand, would be as follows: first, cut the bushes and pare off the surface turf to the depth of three or four inches, so as to remove as far as possible, the roots of grasses and bushes; then level the whole, by filling in sand to the depth of from two to four or five inches, according to circumstances. It is desirable that the surface of the sand should be raised but slightly above the level of the water of the swamp, meadow, or pond filled up, so that, by digging into the sand with the hand or hoe, the water may be found within two or three inches of the surface.

The plants should be taken up with the spade, square turfs of the thickness of two or three inches, this being the depth to which the roots generally descend. When the ground has been leveled and prepared as directed above, it will be convenient to draw straight lines and set the roots about eighteen inches apart one way, and one foot the other, in small clusters of about five or six together, the grasses taken up with them in the turf having first been removed from them. The practice of some has been to set the turf, thus taken up, into the row without removing the grass; but the vines are so tenacious of life that there is little danger of their dying, even if all their natural earth is removed from their roots, and those who have followed this method, have generally less trouble in the subsequent cultivation.

Some prefer to set them in rows at a greater distance apart, having the rows two and a half or three feet, and the plants one foot in the rows. If the sand is thick and loose, so as to make it impracticable to cultivate the vines and pull up the weeds and grasses, on account of the danger of starting the roots, the closer the plants are set the better, since they will thus the sooner cover the ground and get the advantage of the grasses. Where it is intended to hoe the plants in such situations, a foot each way will probably be the most convenient distance between the plants.

There has been some difference of opinion as to the use of peat or sand after the incipient grubbing and paring has been done; but the weight of opinion seems to be in favor of the sand, not because the cranberry will not grow equally as well in peat, but because the grasses growing so abundantly in peat, increase the labor of cultivation. A somewhat similar mode of procedure is sometimes adopted in the case of ordinary low meadows or swamps. If the meadow is covered with bushes, tussocks, remove the former with the grubber, cut the tussocks off level with the surface, when the vines, being taken from another part of the meadow or elsewhere, are set by first striking the hoe into the soil and raising it slightly, when the roots are inserted and pressed down with the foot.

Mr. Thomas H. Samson, of Plymouth, Mass., removed the whortle bushes and alders, tussocks and tops of the soil, and early in the spring set about one-fourth with cranberry vines without any dressing. He continued annually for three years to set the same quantity, a part of which he covered with a dressing of gravel and soil about an inch in thickness, and a part with sand and gravel, and

sowed over the lot a bushel of cranberries, first crushing them and mixing with sand. He finds no beneficial effect from the sand—finds his cranberries do best where the peat or mud is deepest. He sowed his cranberries from October to April. His products were at the rate of 250 bushels per acre. Has no faith in raising cranberries on dry soil.

Other experiments, however, show the practicability of raising cranberries on upland. Mr. Roberts' experiment embraced a tract near the foot of a slope descending in a westerly direction. The ground was plowed eight inches deep, and harrowed; light furrows, three and a half feet apart, were run lengthwise, and the sods were cut from the swamp, carted on the upland, and placed three feet apart in the rows, (though two would have been better,) then carefully hoed and kept free from weeds for two years. No water was supplied except that received from occasional rains.

In the cultivation of cranberries, whether on upland or lowland, it is very important that the ground should be entirely covered by the vines as soon after planting as possible, not only on account of the great saving of labor, by thus preventing the growth of grass and weeds, but also because very little fruit is commonly produced until the vines have thus spread over the surface. At the end of three years, the whole ground should be covered; but in the instances of upland culture referred to, it was not so, though the plantation had been set there, at least three or four years. Probably, if the roots had been but twelve or eighteen inches apart, the result would have been different in this respect. As it was, however, the yield in 1852 was one bushel to the square rod, or one hundred and sixty bushels to the acre, when cranberries were selling readily at $4 per bushel.

For the New England Farmer.

ROOT CROPS.

Mr. Editor:—As much has been said of late to encourage farmers to raise root crops for cattle, I was induced to plant a small piece of ground to carrots the past season. The land on which they grew had been plowed three years, producing the last two years, crops of potatoes; the year previous of corn.

It was of a hard and strong nature, manured at the rate of twenty-five ox-cart loads to the acre, spread and plowed in. The carrots were sown on the 24th and 25th of April, in drills of about twenty inches apart. They came up very uneven, so much so, that I planted the empty spaces with beets and turnips. On the piece of land nine rods in length, by twelve in width, I harvested thirty-two bushel baskets full of carrots, five of turnips, two of beets, and one of parsnips. This is at the rate of four hundred and seventy-four bushels to the acre, a small yield compared to some; but had the carrots occupied all the ground sown, at a proper distance apart, the yield would have been much larger, perhaps double, as they grew to a very large size, some weighing upwards of four lbs. each. Even at this yield, which is, perhaps, nothing more than an average, I consider the carrot crop, taking into consideration the land sown, trouble and expense, more profitable to me the present season than either the crops of corn or potatoes that grew adjoining in the same field, whether designed for home consumption, or to sell at market prices. F. E. Howard.

West Bridgewater, November, 1855.

For the New England Farmer.

SEVERAL EXCELLENT PEARS.

The Washington Pear is a fruit not extensively known, but I have seen persons who have tasted it the past season who consider it of rather more agreeable flavor than the Bartlett, which is no mean commendation. It is a native of Delaware, of medium size, turbinate, rather full in the neck, of beautiful yellow ground, with a blush, thin skinned, tender, juicy and delicious. In season a little later than the Bartlett. The tree is an upright, handsome grower, and bears early, and the fruit is uniformly fair. If this pear were somewhat larger, it would rival the Bartlett as a market fruit.

The Heathcot is a beautiful native fruit, and I think bears an affinity to the St. Michael. Medium size, stout, pale yellow, of very tender skin and flesh, juicy, with rather more of the champaign flavor than the St. Michael. Ripe last of September, and ranks among the best, though not much known. Cole says, "thrifty, hardy, but moderate bearer."

The Andrews Pear is a peculiarly delicious fruit, and although not so sweet as the Seckle, I prefer it to that, for its singular and beautiful aroma. It is rather later than the Bartlett, and is of increased value on this account. It is a native fruit, and so generally disseminated that a formal description of it is hardly necessary. Not so handsome as some pears, being a pale yellowish green when fully ripe, yet its tenderness and freshness, juiciness and good size, give it a very high rank. Several persons to whom I had presented the Washington, Bartlett and Flemish Beauty, pronounced the flavor superior to them all. Good grower and bearer, but requires high culture.

The Flemish Beauty is so well known, that hardly any thing can be said of it except to praise. Its flavor is not always first rate, but its great size, early and heavy bearing will ever make it a great favorite. A twig of this fruit was lately exhibited at the annual show of the Massachusetts Horticultural Society, but about eighteen inches in length, having *thirteen* enormous pears upon it!

The *Louise Bon de Jersey* is another pear of standard excellence, and possesses some admirable traits which the Flemish Beauy and many other excellent pears do not. One of these traits is its increase in sweetness and goodness up to the stage of decay—never being over ripe—a quality equalled only perhaps by the Dix.

Among the many pears of the nurserymen, but few stand out prominently in the Boston market. These are the old Jargonelle, the Bartlett, the Seckle, the Bon de Jersey, the Flemish Beauty, the Beurre Diel, the Andrews and the Duchess d'Angouleme. Some of these varieties sell from fifty cents to two dollars per dozen, and the price does not seem to come down with the increased supply. Some persons have a passion for raising nice pears, while others have an equal passion for paying a good price for them. As yet, the Bartlett seems to be the most popular.

If the price of pears should keep up, a question would present itself to the serious consideration of the extensive and prudent farmer, who has heretofore cultivated only winter apples, whether the planting of pear orchards—of dwarfs and standards—would not be a more profitable stroke of husbandry than the planting of apple orchards?

If we had as many good varieties of late pears as we have of winter apples, and if they were as easy to raise and send to market in bulk or barrels, no reasonable farmer would hesitate. But we have not, and circumstances alter cases. If good winter pears is not an anomaly—or something akin to the unnatural—why have we not more of them? The Lawrence, the Beurre de Aremberg, the Glout Morceau, Easter Beurre, and some few others, are said to keep well, but we find them ripe in the middle of November, and I am inclined to think only a very few of them could be kept in flavor till mid-winter. However, if the regular farmer were obliged to send his fall pears to market as they ripened, with present prices, he would probably find it more profitable than apple culture. As it is now, the nurserymen and amateurs supply the market, with but few exceptions.

West Medford, Nov. 16, 1855. D. W. L.

For the New England Farmer.

ON DRAINING.

MR. EDITOR:—A word on the subject of draining. It is my opinion that farmers have not yet given this important subject sufficient consideration. My neighbor Jones had several acres of low wet land that produced only wild grass, which was used for bedding or litter; he was fearful if he should cultivate it, the soil would all wash away in freshets. Well, I bought a part of it, and dug or trenched it from two to three feet deep, (as deep as the muck was,) then dug a wide ditch, 5 feet wide, on one side, for the brook to carry off the usual water, and deep enough to drain the land below the mud. On the other side, where there were powerful springs, I excavated a fish-pond about 50 feet long and 40 feet wide, and about two feet below the bottom of the muck, and a channel or drain from that to the larger brook, of sufficient depth to keep the pond dry if I chose, and made a flume at the outlet of the pond so as to retain the water if I chose, or drain it in wet weather. My pond was soon filled with pure spring water, in which I put gold-fish, perch, trout and brims about one hundred and fifty, all of which are doing well.

My land was as dry as any land in the place, and produced more than three times as much corn, potatoes, squashes, tomatoes, and melons than my old land: it is perfectly mellow, and free from baking, and dry enough to raise any kind of early vegetables. And this where cattle could not go without getting mired before the meadow was drained. I get two crops a year from this renovated land without trouble, as it is so much more pliable to cultivate than old land, and free from weeds. I would not give an acre of it for four acres of old high land to raise vegetables or grass.

Farmer Jones retained about three-quarters of an acre above mine which he drained into my pond, and into our deep brook, and filled his drain with small stones and covered them over deep enough to cultivate over, and his worthless bog at once become good land to cultivate, and after plowing it several times, he raised in 1853 a good crop of celery, and in 1854 he raised potatoes enough to bring him $200, and after digging his potatoes in August, he sowed turnips which brought him at least one hundred dollars, and all of this where the hay crop was not worth two dollars a year before draining. Now if draining will produce such crops, we are well paid for our labor. Farmer Jones has tried other bogs with equal success; he is now draining his upland with blind drains to prevent it from drying up and cracking, which he finds is of great use, especially in places where water stood late in the spring—in fact most of our land would be better if drained. Yours, S. A. SHURTLEFF.

Spring Grove, 1855.

For the New England Farmer.

GREEN CORN FODDER.

MR. EDITOR:—Sir,—I have read the article of your correspondent on green corn fodder in your paper of this date (Vol. X, No. 46) with much satisfaction;—because it carries upon the face of it the evidence of an inquiring mind. Whether the writer was prompted to write, by any thing I have said on the same subject, in two former communications, about the time *green corn* was in condition to be cut, I am not advised;—but this is certain, he has hit upon the right plan of determining, whether or not it is worth cultivating for this purpose. It is undoubtedly true, as he says, that "the rest of mankind" generally considered it of great value, and that some good farmers go so far as to say, that they should not know how to get along without it. This I have heard distinctly said this present season, by the man who brings the butter *weekly* used upon my table—and by his wife also, who understands dairy management better than any man among us, and has earned more premiums for first-rate butter than any lady within my knowledge. But still, I agree with your correspondent, that the question of the *intrinsic value of green corn fodder* is not yet settled, and that it is a fair subject for continued experiments;—and as I have before suggested, of specific premiums to be awarded by our Agricultural Societies. AGRICOLA.

Nov. 17, 1855.

TO MEASURE AN ACRE OF GROUND.—In measuring land, 30¼ square yards make one square rod, and 40 square rods make one square rood, four of which, or 160 rods, make one acre. It is evident, therefore, that 40 rods long by 4 rods wide will make an acre. The same result may be arrived at by measuring 229 feet in length and 198 feet in width, or by measuring 73½ yards in length, by 66 yards in breadth. To lay out an acre square, 209 feet on each side is the nearest foot that will make an acre, being less than an inch each way over the exact distance. 43,560 superficial feet, or 208 95-100 feet on each side, constitutes an acre of ground.

☞ The annual meeting of the Hillsborough County Agricultural and Mechanical Society was held at Nashua on the evening of Oct. 2d, and continued by adjournment to the next evening.

The following named gentlemen were chosen officers of the Society for the year ensuing:

President—JOHN M. TYLER, Pelham.

Vice Presidents—Hiram Munroe, Hillsborough; Isaac Kimball, Temple; Samuel Little, Hollis; P. M. Rossiter, Milford.

Rec. Secretary—Moody Hobbs, Pelham.

Cor. Secretary—H. A. Daniels, Milford.

Treasurer—David Stewart, Amherst.

A HOUSE TO LIVE IN.

Few things are dearer to us through life than the memories of the old Homestead,—the house in which we were born, the old familiar barn, the garden and orchard, the pastures where we rambled,—the pleasant brooks where first we cast a hook for the speckled trout, or the millpond that bore us upon its surface in our first nautical adventure, or where our piscatory tendencies were developed, and the roach and perch and voracious pike were the reward of our patience and skill. So the memories of the silent woods, or of their deep sounding bass in a storm, or a look out from the hills, are indelibly impressed upon the mind of those born and brought up in the country. But there is another class of recollections, more deeply seated than these, which go to make up some of the purest enjoyments of life, and which influence us in a greater or less degree in all its varied duties and pursuits. It is the recollection of our early associations with parents, brothers, sisters, and neighbors,—intercourse with the dearly-loved, when the heart was young, and free, and susceptible of impressions that cannot be obliterated by time, or space, or care.

How important, then, that the House in which we live, together with all its surroundings, should be of such a character as to impart agreeable emotions and impressions; to leave upon the mind that is to be called into the busy whirl of commercial affairs, the anxious duties of professional life, or the unsatisfactory preferments, even, of political success, the delightful recollections of youth, and home, and the wholsome principles inculcated in well-ordered households. Such early impressions are a sort of capital, a bank upon which we may draw with pleasure and profit through life. Indeed, they often mould the affections and lead them into a current in which the whole character takes its course, and becomes exemplary or pernicious as the early tendencies have prevailed.

The influence of the *physical* home has been too long underrated among our people. It has too long been conceded that a roof over the head, a floor beneath the feet, a fire-place and bed, were all that was necessary for the comfort and happiness of the family. Happily, these views are giving place to those of a more comprehensive nature, and more

in consonance with the progress which has been made in almost everything which conduces to elevate the moral and material condition of man.

There is one point, at least, which ought to be well considered by every person who is about to build—and that is as to what the *general appearance of the structure* shall be. It is as easy, and as cheap, to erect a building that shall have some pretentions to architectural taste, and which shall be attractive and pleasing to the eye, as to construct it in violation of all rules, and render it a blotch upon the natural beauties which may surround it. In order to accomplish this the proprietor himself, must possess some knowledge of construction, or have before him some plan which he is willing to adopt. Therefore, to be of service to those about building, we propose to give, in the course of the coming year, in our columns, such perspectives and outlines of buildings as we think may be useful as suggestions or as may be adopted in full.

The picture which we present above is rather as an example of taste, than as such a house as would be recommended for farm purposes. We shall, however, give others, suited to the farmer's wants, and which will have the merit of being constructed at a cost coming within the means of most of those who build, and at the same time, possessing such conveniences and architectural proportions as will make it a credit to its owner.

HUSK BEDS.

As each autumn has returned, for several years past, we have advised all corn-growers to save their husks for under beds, believing they are the very best substance for this purpose that is or can be used. They should be the inner husks, clean and whole, and spread on some airy floor for a few days in order that they may become perfectly dry. Then they may be put into the ticks, and they will last for many years. We have some of these under-beds now in our house which have been in use more than twenty years; and with an annual ventilation and beating, by being emptied on a chamber floor, and with a little replenishing with new husks, they are now as good and lively as when new. The husks had better not be stripped up as some have done. This makes the substance finer and more liable to mat up. Let the husks be whole, and, drying in irregular shapes, they will retain those shapes and lie lively in the bed for a long time. There is a beard, or furziness, on each husk, that prevents any insects crawling through the beds; consequently they are entirely free from vermin, of which straw is apt to be full. They are, therefore, clean, sweet and healthy. A good husk bed is equal to the best mattress for summer use, and we have slept in feather beds in winter not half so soft as these.

The best time to save the husks is when in the act of husking the corn. By a little practice, the husker will soon learn how to strip off first the outside, coarse husks, and by another motion, seize the inner ones, (removing the silks at the same time,) and dropping them into a basket at his side. It will take a little longer to husk out a bushel of corn so, but the husks will most richly repay for the extra time. When this process has been omitted, it will not be a great job to visit the husk pile after the corn is removed, and by hand, pick out enough of the clean, inside husks to make a bed. We consider such a bed worth a five dollar bill. After being made, there is no need of ever going after straw with which to fill the under beds. The job once done, is done for life.—*Drew's Rural Int.*

For the New England Farmer.

THE MOST NUTRITIOUS BREAD.

The various tissues of the body, as bone, fat and muscle, are formed from certain elements contained in the blood, and conveyed by it to the formative vessels. These elements are obtained from the food, and conveyed through the lacteal vessels into the blood vessels. That food that supplies most abundantly all the elements needed to build up all the tissues of the body, or which supplies them in proportions best suited to the actual wants of the body, must be the most nutritious, and must impart the most strength and vigor to the frame. The bread in use among us is chiefly made of wheat. In the process of manufacturing wheat, it is separated into two parts, the flour and the bran. We use the flour for bread, and consign the bran to the use of the pigs and other animals. The corn bread and the "rye and Indian," upon which the former race of "hardy New Englanders" were raised, is comparatively unknown in the present generation. I propose to inquire whether the fine flour, of which our bread is almost wholly made, is capable of supplying in the greatest abundance, those elements of which the various tissues of the body are formed.

According to Johnston's tables, one thousand pounds of wheat meal contain of

Muscle material	156 lbs.
Bone material	170
Fat material	28
	354 lbs.

One thousand pounds of fine flour contain of

Muscle material	130 lbs.
Bone moterial	60
Fat material	20
	210 lbs.

Now if we subtract the tissue-forming materials contained in fine flour, from those contained in wheat meal, we find that one thousand pounds of wheat meal contain 144 pounds more than one thousand pounds of fine flour. These tissue-forming elements are necessary to supply the waste that is constantly going on in the system. The more rapid is the waste from labor or exposure, the more necessary are they to the animal system.

The Yankee who is always in motion, always in a hurry, and by his incessant activity keeps up a continual friction in his system, needs a large supply of tissue-forming material in his food. Living as he does upon flour bread, his bones are small, his muscles are lean and tough as whip cords, and the fat cells of his cellular membrane are almost wholly destitute of fat. His bread should be made of wheat meal, and if to this were added a large per centage of corn meal, which contains a larger proportion of fat-making material, it would fill up his fat cells, and render the contour of his whole frame less angular and furrowed, and increase in him that *embonpoint* that contributes so much to the good looks of

John Bull. When we live upon fine flour, we are throwing away, every day of our lives, a large part of those elements of nutrition that are essential to our strength and vigor. Is it any wonder then, that our children grow up effeminate and delicate? Instead of being fed upon coarse bread, and sent into the open air for exercise, by which their lungs and limbs may be expanded and developed, they are fed upon the finest flour, and kept within doors in air-tight houses, like plants in a hot-bed, and like them, they wilt upon exposure. If regard to the health of ourselves and our children, will not lead to a change in this regard, I might at the present time, when all bread-stuffs are almost at famine prices, appeal to the pockets of our countrymen. A thousand pounds of wheat meal cost but about two-thirds as much as a thousand pounds of fine flour, and yet the former contains 144 pounds more of the very material which is most essential to our health and vigor.

It has been slanderously affirmed that the most sensitive nerve of the Yankee leads to his pocket. Now I do not believe this, and yet his pocket nerve is apt to respond rather quickly to the touch. If the rough handling to which this nerve has been subjected for the last year, shall lead him to look about him and inquire how the greatest amount of the necessary elements of nutrition can be obtained for the least money, it may benefit him not only on the score of economy, but also on that of health. And the benefit to his children may be even greater than that which he may experience in himself. R.

Concord, Nov. 13, 1855.

"HAULING" IN OXEN.

MESSRS. EDITORS:—In a late number of your valuable paper, I find an inquiry for a remedy for "Hauling" in Oxen.

Having dealt in and used oxen for the last twenty years, I have frequently purchased those that had become addicted to the vicious habit of "hauling." The cause of this is perfectly simple, and the remedy equally so. The cause of oxen hauling is to be attributed uniformly to their having been worked in too short a yoke. Hence the proper remedy is to put on a longer yoke—say, for large oxen, two feet between the inside bow holes, and my word for it your oxen will not "haul" worked in such a yoke. And here let me add, that it is a great error among many of our best farmers, particularly in the western and more level portions of our State, to work their oxen in too short a yoke. It must be apparent to every observer, that they will work much easier in a long than short yoke. I have purchased a great many cattle of the very best farmers in your county, and in the Genesee valley, and have always noticed this defect in their yokes, while in the central and more eastern portions of the State, they are obliged to use longer ones. Indeed, how would our Eastern or New England farmers plow on their hill-sides with a Monroe or Livingston Co. yoke on their oxen? If oxen are addicted to "crowding," apply the short yoke.

If you deem this worthy of a place in your paper in answer to the inquiry of "K.," you are at liberty to give it an insertion. E. TERRY.

Waterville, N. Y., Oct. 20, 1855.

EDS. RURAL:—To prevent oxen from hauling, I have seen the following tried several times, and always with *success*. Take a strong cord, (a good fish-line will answer,) and tie it to the *end* of the inside horn of each ox, short enough so they will straighten the cord, before they can haul on the yoke. They soon give up, and a few trials will completely break them of the habit.—A SUBSCRIBER.—*Alexander, N. Y., Oct.* 2.—*Rural New-Yorker.*

THE TOWN OF BILLERICA.

We have before us a well printed pamphlet of one hundred and fifty-two pages, giving an account of the celebration of the *Two Hundredth Anniversary* of the incorporation of the town of Billerica. All the arrangements for the occasion were made by the town, in its municipal capacity, and were carried out in a liberal and comprehensive spirit. Many gentlemen who were born in the town, but who had become scattered abroad and made their mark in the world, were gathered within its limits once more, and gladdened the occasion with their presence and their words of wisdom. Many ladies were also present, who returned to the place of their nativity, or who accompanied their husbands to celebrate this anniversary; so that the gathering was of the most social and happy character.

Col. JOHN BALDWIN was President of the day, and, assisted by his competent friends and neighbors, directed the affair in a proppt and pleasant manner, which was gratifying to all. A hymn was read, composed for the occasion by Miss E. A. FOSTER, one of the daughters of Billerica, after which an admirable Address was delivered by the Rev. JOSEPH RICHARDSON, of Hingham. Then followed a Poem, abounding with capital hits and happy thoughts, by DANIEL PARKER, M. D., of Billerica. After a short recess, the crowd gathered around the amply spread table, and partook of an excellent dinner.

The third regular sentiment was—"*The Plow*—Its *one* share in a bank of earth is worth *ten* in a bank of paper."

This, being strictly agricultural, and our response being of the same character, we have no hesitation in introducing it here, as follows:—

MR. PRESIDENT:—It is always gratifying to me to speak of my favorite art—and it is particularly so on such an occasion and before such an audience as this. I call it an *Art*; but it is not purely so, because to be a good farmer requires some knowledge of many of the *sciences*, as well as of the Arts. The mechanic is greatly aided by strict mathematical guides, and the professional man is surrounded by forms and rules which lead him along in the same course which others have trod for thousands of years. But it is not so with the farmer. There are few rules to guide him, and little that he does at one time is positively reliable at any other, because the circumstances under which

he labors are so variable. He enters his fields with the great book of Nature open before him, ample in her page, and full of interesting and important teachings; but without many of those helps, the effect of study and experiments of ages, reduced to strictly arbitrary rules, and which, carefully followed, will produce a well-known result.

No man, therefore, needs a sound and ripe judgment, a clear and comprehensive intellect, and a general knowledge of mechanics, of the physiology of plants and animals, of botany, of meteorology, geology, and something of the laws of trade and political economy, more than the farmer. The manner of cropping his fields this year may not precisely answer for the next, because the season may be of a widely different character, and thus require a different mode of treatment. He must lean upon a well-balanced judgment, and the great truths of Nature, stored up by experience and observation.

If I desired to pass an encomium upon Agriculture, I might with propriety point to these substantial homes around us, these churches and schoolhouses, springing as they have, from the products of your still fairer fields. Or I might contrast it with that which sustained your ancestors nearly two hundred years ago, when these roads were at best but bridle paths, and your gardens and fields were occupied by the grim forests, never lighted but by the council fires of the Indians who occupied them before you. These changes have been wrought with carefulness and toil through long years of economical industry, and a practice of the stern virtues implanted in your bosoms by the noble men and women whose memories you celebrate to-day.

What if one of the dwellings which stood on this plain had been protected from the elements, with all its household goods, its furniture, bedding, wearing apparel, together with the means of travelling which they then possessed, and could be visited and seen by us to-day, would not your admiration be tempered with gratitude to Him who has led you along to these pleasant places, and crowned your labors with peaceful abodes and the fulness of domestic comforts? From those faint and boding beginnings have sprung this little republic, with all its social enjoyments, so unlike the garrisons and perils which surrounded your ancestors two hundred years ago!

How would the fabrics of the farmer's family, then—the homespun woollen gowns, dyed in the chimney corner, and the checked linens, both for dresses and aprons, compare with the glossy silks, Thibets and muslin-delaines, together with the rich shawls, satin cloaks, and elegant Talma capes and Honiton laces, that I see around me to-day! There were then no Lowell or Manchester, turning out thousands of yards of cotton-cloth an hour, to clothe and *civilize* the world—or carpet-looms to weave the finest wool into fabrics as soft as the thistle's down, and with colors as bright as the butterfly's wing, to soften the footstep upon the floor, or shut out rude winter winds.

So was the style of living and travelling as different as the style of dress. Plain meats and vegetables,—the turnip instead of the potato,—and principally rye and barley bread, made up the sum of their frugal meals,—and there was less dyspepsia and despondency in those than in our more artificial life. Men and women travelled on foot, or at best, on horseback, two or three upon a single beast, through lonely and intricate paths, when necessity, of one sort or another, compelled them to visit some of the earlier and more populous settlements. Now, we think it a hardship if our horses do not accomplish ten miles an hour, in carriages so set upon springs of steel, and so cushioned as to roll us along as though reclining on beds of down; or, in locomotive houses, at forty or fifty miles an hour, while we eat, drink, smoke or sleep at will, lounge away the time in listlessness, or grumble at the speed which *only* conveys us *sixty* miles an hour! In mid-winter we sit in churches at summer temperature, where, perchance, flowers bloom and shed their fragrance around the worshippers, while soft and entrancing music floats through the vaulted aisles.

In the fields the contrast is as great in the implements with which they cultivated the soil, as in any thing else. Shovels and plows of wood, heavy and cumbrous harrows and carts, and hoes and scythes, exhausted the strength to wield them which should have been devoted to moving the soil. But in the face of these discouragements, the stern old Puritans succeeded in all they undertook; they were methodical, and earnest, and persevering. If separation from friends, grim woods, coarse, and sometimes scanty fare, and savage hate, could not daunt them, neither could the common deprivations and embarrassments of their position, fail to stimulate their exertions. Faith led them here, and it did not desert them when sore and grievous trials pressed them on every side.

"The Plow,—Its one share in a bank of earth is worth ten in a bank of paper."—This sentiment, upon which you have been pleased to call me up, suggests more topics than time will allow me to touch upon now. The *one* share with which your fathers wrought, was but an indifferent affair; we have not only improved greatly upon *that*, but have added another, so that while shares in banks of paper, in railroads, in manufactories and mining companies, are uncertain, unprofitable, or ruinous, the *Plow*, with its two shares, is upturning the soil to the sun and air, and doubling the ordinary profits of the fields.

SAGACITY OF A HORSE.—A young filly belonging to a gentleman in this vicinity, which had been at

pasture during this summer and fall, with a number of other colts, on Pettick's Island, in Boston harbor, was brought over to Quincy Point in tow of a boat, on one of the coldest days of last week. She was then led behind a wagon, (it being evening and the night quite dark) when she broke away and started for the Point. After hunting for her an hour without success, the search was given up, and it was supposed she had taken to the water, and on account of the wind and strong current which was then running like a mill stream, it was supposed she was carried out to sea. But the next day, on going over to the island, she was found quietly feeding with her companions. Considering the distance, which is more than a mile from the main land, and that it requires large leeway and hard rowing for a boat to bring up to the island, also that the night was cold and stormy, it may be recorded as a case of singular sagacity and cunning. Truly this was a pursuit of "companions under difficulties."—*Transcript.*

For the New England Farmer.

ELECTRICITY vs. LIGHTNING RODS.

MR. EDITOR:—As there have been so many articles in your paper upon the erection and construction of lightning rods, that another upon that subject would only appear to add to the vast pile of false opinions and ideas, which are so prevalent upon such a subject, I would not, were I able, put forth any long and elaborate opinion, which, instead of demonstrating any fact or problem, would only confuse the mind of the reader.

But there are a few facts and principles, which I think have never been inserted in the many communications, that are absolutely necessary to be understood with to insure safety from lightning. That the reasons for my simple directions may be more clearly seen, let us examine a few of the most prominent features of electricity, the causes which produce it, as we see it displayed in the thunder storm, or the tempest, and lastly, some of the best means to avoid the many dangers to which it constantly exposes us.

The various phenomena which are to be classed under the head of electricity, and of which thunder and lightning are one, are very imperfectly understood. Some facts, and the principles explaining them, have been thoroughly investigated—but others baffle all human efforts. There is a certain *something*, called by philosophers electric fluid, which is naturally diffused over *all* bodies. It is in the chair on which I sit, in the table, the paper, my hand—in a word, in everything. In its natural state, it is equally and generally diffused, producing no sensible effects. But there are certain causes which collect it. When it is thus accumulated in one place, or upon one body, it produces very striking results. Among the processes by which the electric fluid is accumulated and thus prepared to produce these sensible effects, one of the principal is, the *rapid condensation* of vapor. This might be shown by a simple electrical experiment, which I have not time or space to relate. One of the most prominent features of electricity is, that some substances afford it easy passage over them, while others do not. The former we call *conductors*, the latter *non-conductors;* metals and water are conductors, almost all other substances are non-conductors.

When there are collected in one place large quantities of electricity, if there are conductors, or a chain of conductors to convey it away, it passes off *silently*, without any sensible effect. If there are no conductors, it accumulates until it becomes excessive in quantity, it darts off through the air, or any substance which lies in its way, often doing irreparable injury. Splendid and appalling as these results sometimes are, they are imitated precisely, but harmlessly, by the apparatus of the lecturer. When it darts to the earth it always chooses the *best conductors* in its path.

The process by which electricity is accumulated in the thunder storm, is, as has been said, by the rapid condensation of vapor. We do not, it is true, always have thunder and lightning when clouds form in the sky. It is only when the black, well-defined clouds rise in the north-west, that the *fluid forms faster than it can escape.*

Now when a cloud becomes excessively charged with the fluid, it must be at the expense of some surrounding cloud or locality, and it generally happens that this cloud or locality is *nearest* the one that is filled. Now as the air is a perfect non-conductor, the quick passage of the fluid from one cloud to another is easily afforded by the moisture contained in the air, or through some substance upon the earth. Thus it often happens that the fluid is seen to pass from a cloud to the earth and then to another cloud. Or, sometimes the spot upon the earth has less than its natural share. If in its passage in either the above instances, any body lies in its way, it will be struck, and receive injury in proportion to its ability to conduct it away. Then the only means by which we can avoid its effects is to place as perfect conductors in its circuit as possible.

Granting the above facts to be true, which I think no one will dispute, the philosophy and utility of lightning rods are evident. But to explain how they may, in my opinion, afford that protection desirable, is the object of this article. That they are seldom if ever erected *philosophically*, is, I think, true. If one part of them is as it should be, there is always something around or about them to utterly destroy their utility. The rod should always be of square iron, about one-half inch; it should pass through glass insulated, not fastened with iron spikes, but with wooden brackets, painted, and nailed with copper. They should be of sufficient size to admit the rod to pass through them freely. The points of the rod should be plated with silver to prevent them from corroding, and the ends instead of being linked should be screwed together, after the manner of joining steam pipes, that the ends may touch one another. The foot should be of copper, or some metal not easy to corrode, and placed in a well, or perpetually moist place. I think one rod upon any ordinary house would be sufficient. They should project above the house in proportion to the size of the house. A rod, placed upon a house in the manner I have just described, will, I think, protect it. And just as far as one departs from this manner, in just that proportion will the efficiency of the rod be impaired; and for these reasons. The rod is constantly surrounded by an electric current during a thunder storm or shower. If, in the travels of the shower, it happens that a cloud positively electrified approaches the house, very likely some spot around it is negligently charged, or has less than its natural share, then that in the former darts to the latter

to restore the deficiency. Now if the rod is adjusted in the manner I have described, it will draw it from the cloud and conduct it silently and insensibly to its destined spot. If not, it will prevent obstructions to its passage, and these will cause the fluid to explode, thereby causing damage to life and property. The rod should never be painted, because the fluid only passes over the surface of the rod, the oily matter being a perfect non-conductor.

These few, simple directions are not expensive, but I think I have never seen them in print. It is true, we know but little of that subtile fluid, especially in its natural state, where it works silently and unseen, exerting, probably, in the hands of the Author of Nature, some important object.

Its powerful agency works unseen on the intimate relations of the parts and properties of bodies, effecting changes in their constitution and character, so wonderfully minute, thorough and universal, that it might almost be considered as the chief agent of nature, the prime minister of Omnipotence.

The science of electricity has proved, in many instances, the key by which we have entered into the innermost recesses of nature, and discovered the secret of many of her operations. It has, in a great measure, lifted the hitherto impenetrable veil that has concealed the many mysterious workings in the material world, and has opened a field for thought, and inquiry, as boundless as it is inviting.

Westboro', 1855. W. S.

For the New England Farmer.

RELATIVE VALUE OF OATS AND CARROTS.

MR. EDITOR:—In reply to one of your correspondents, who makes inquiry respecting the relative values of oats and carrots, for feeding horses, sheep, &c., I would state the following, gathered from a reliable source.

Oats are remarkable for the amount of gluten and fat they contain, being superior in respect to the former, and but little inferior in respect to the latter, to Indian corn, as will appear from the following numbers:—

	Scotch oat meal.	*Indian corn meal.*
Water	14	14
Gluten	18	12
Fat	6	8
Starch, &c.	62	66
	100	100

There is a difference, in different kinds of oats, in regard to the amount of gluten they contain. Scotch oats—the kind taken into the present account—contain more gluten than the American. The gluten and fat which the oats contain render them exceedingly nutritious for beast as well as for man.

They are used more extensively in the British Isles, and especially in Scotland, than in this country, or, indeed, in any other, as far as is known. They admit of cultivation in higher latitudes than wheat—oats growing as far north as 65°, while wheat ceases at 60°, in Europe.

Carrots contain a much larger amount of water, and a much smaller amount of dry food, than oats, the relative proportion being 83 pounds of water and 17 of dry food, in every hundred pounds. By the above table you will see that oats contain more dry food and less water, the proportion being 86 pounds of dry food and 14 of water in every 100 pounds.

The gluten, starch and sugar of carrots are held in solution by the water they contain, and this renders them more easy of digestion, but less substantial and strengthening. Carrots are often fed out to horses when not at hard work, but when a long journey is to be performed, or a piece of hard work to be done, oats are preferable.

Many choose corn for working animals. It contains less of the nutritious gluten, but more of the bulky and porous starch, than oats. Starch is wha the rice-eating Hindoos and the potato-eating Irish distend their "fair round bellies" with. Corn contains more oily matter than oats, and this is what gives it its peculiar fattening properties, and renders it an appropriate article of food for swine that are contending for premiums, or the earliest acquaintance with the butcher's knife. Carrots are undoubtedly a wholesome and nutritious article of food for sheep, and might be used for this purpose to a much greater extent than they are, but they are not so nutritious as oats. In this connection I would say a word in reference to wheat as an article of food.

Few persons, I imagine, know how little of the nutritious element, which this grain possesses, they obtain, in the ordinary way in which it is prepared. The proportion of gluten contained in the whole grain is 12 per cent.; bran, 14 to 18 per cent.; fine flour, 10 per cent. From these numbers, it is seen that meal made from the whole grain contains 2 per cent., and that from the bran, from 4 to 8 per cent. more gluten than fine flour. And where there is more gluten, there is more nourishment, as we have said before. And furthermore, experiment shows that bread made of the meal of the whole grain is more salutary. Such being the facts, the wonder is that we persist in eating fine flour bread, and in thinking the finer flour is, the better it is. Common sense teaches that here is not only an opportunity, but an actual need of reform.

Concord, Nov. 5th. J. B. R.

DEATH OF PROF. J. F. W. JOHNSTON.

This gentleman, distinguished and widely known in Great Britain and America through his Agricultural writings, died at his home in Durham, in his 60th year, on the 18th of Sept.

His writings are voluminous and replete with instruction. His principal work, "*Lectures on the application of Chemistry and Geology to Agriculture*," first published in 1844, and since gone through several editions both in Great Britain and this country, is a systematized encyclopædia of Agricultural science. For a number of years he was chemist to the Agricultural Chemistry Association of Scotland, and to the Highland Agricultural Society, and very many important papers issued from his laboratory. Mr. Johnston visited this country in 1849, at the invitation of the N. Y. State Agricultural Society, and delivered the address at their State Fair—visiting also Canada and New Brunswick. On his return he published a report upon the Agriculture of New Brunswick, and his "Notes on America." Prof. Johnston's works show in general great care and judgment in the selection and weight given to facts employed and statements made, but in these two, a painful want of this characteristic was observed. His recent work entitled "Chemistry of Common Life," is a very valuable and interesting book—its science is sound, and ap-

plying as it does the great facts and principles of chemistry to matters connected with every-day experience, illustrating the one by the other, it will find readers in every class of society, and all will be benefited. His loss will be felt by Agriculturists every where.

HORSE SHOES, AND HOW TO PUT THEM ON.

The shoe must possess substance enough to prevent its bending, and width of web enough to ensure protection to the foot; the thickness, like the width of web, should continue precisely the same from toe to heel, and not, as is generally the case, increase as it proceeds backwards, until at the heel it becomes fully doubled. This is a great evil for many reasons, and among others, that it throws the horse forwards upon the toe, and causes him to strike it against every projection that comes in its way. Now, as horses are sufficiently prone to do this, without the assistance of high-heeled shoes, it should be our business to obviate it as much as possible.

In doing this we only carry out in the shoe what nature has already done in the foot; she has arched the toe of the coffin-bone, to diminish the effect of a jar at the toe; and we do the same to the shoe to lessen the cause of the jar. The common practice is just the reverse of this; it welds a lump of steel into the toe, which only increases its thickness, and the number of obstacles that it necessarily encounters, but, being of a harder texture, is longer wearing down, and consequently exposes the foot to the greatest amount of concussion. Supposing a horse to wear his shoes so hard, that they will not last a month—much beyond which, as the foot will outgrow them, they had better not last—then steel the toe; but still let it be turned up as much out of the line of wear as possible. A small clip at the point of the toe is very desirable as preventing displacement of the shoe backwards; it need not be driven up hard, it is merely required as a check or stay. The shoe should be sufficiently long, fully to support the angles at the heels, and not, as is too often the case, so short, that a little wear imbeds the edge of it in the horn at these parts. The foot surface of the shoe should always have a good flat even space left all around for the crust to bear upon; for it must be remembered, that the cust sustains the whole weight of the horse, and needs to have a perfectly even bearing everywhere around the shoe. In this space the nail-holes should be punched, and not, as is too often the case, partly in it, and partly in the seating. In what is technically called "blackholing the shoe," which means completing the opening of the nail-holes on the foot surface, great care should be taken to give them an outward direction, so as to allow the points of the nails to be brought out low down in the crust. The remainder of the foot surface should be carefully seated out, particularly around the elevated toe, where it might otherwise press inconveniently upon the sole; and I would have the seating carried on fairly to the point where the crust and the bars meet, in order that there may be no pressure in the seat of corns; the chance of pressure in this situation will be further diminished by bevelling off the inner edge of the heels with a rasp.

The ground surface should be perfectly flat, with a fullering or groove running round the outer edge, just under the plain surface, whereon the crust bears. The principal use of the fuller is to receive the heads of the nails that secure the shoe, and prevent their bending or breaking off:—it is further useful in increasing the hold of the shoe upon the ground, and with this view I always have it carried back to the heels.

The danger apprehended from the shoe being applied to the foot so hot as to burn the crust, and cause it to smoke, is utterly groundless. I would not have it made to burn itself into its place upon the foot, without the assistance of rasp or drawing-knife, but I would have it tried to the foot sufficiently hot to scorch every part that bears unevenly upon it; because the advantage of detecting such projecting portions is very great, and this mode of accomplishing it is positively harmless. Indeed it is the only one by which the even bearing necessary to a perfect fitting of the shoe can be insured.

No shoe should ever be nailed to the foot until it has been ascertained that the pressure of the hands is sufficient to keep it steadily in its place, and preclude any appearance of daylight between it and the foot; for, if the shoe does not accurately correspond to the surface of the foot, but is disposed to shift about upon it, the nails will be exposed to a constant strain in order to keep it in its place; whereas they should merely have to hold it to the foot, and not, as it were, to keep it there by force.

The shoes should not be permitted to remain on the horse's feet more than two or three weeks without removal; for in that time the heads of the nails will have become worn, and, from fitting the holes less perfectly than before, will admit of a trifling motion of the shoe upon the nails; whereby the holes in the hoof will be enlarged, and the security of the shoe endangered. Another reason for removing the shoes, is the opportunity which it affords of paring away those portions of horn which in a state of nature would have been worn down by contact with the ground.

The next circumstance to be considered is one of vital importance to our subject, as upon it depends the amount of disturbance that the natural functions of the foot are destined to sustain from the shoe; viz., the number and situation of the nails which are to secure it to the foot. If they be numerous, and placed back in the quarters and heels, no form of shoe, be it ever so perfect, can save the foot from contraction and navicular disease. If on the contrary they be few, and placed in the outside quarter and toe, leaving the inside quarter and heels quite free to expand, no form of shoe is so bad that it can, from defective form alone, produce contraction of the foot.

Three years ago I commenced a series of experiments upon shoeing, with a view, among other things, of ascertaining how few nails are absolutely necessary, under ordinary circumstances, for retaining a shoe securely in its place. The subjects of my experiments were six horses of my own, and three belonging to friends; the nine among them representing very fairly the different classes of pleasure horses; not indeed including hunters or race-horses, each of which require a separate and totally different treatment, but carriage horses, ladies' horses and roadsters; and they also included the common variations in form and texture of the generality of horses' feet.

When my attention was first directed to the subject of nailing, I was employing seven nails in each fore, and eight in each hind shoe. I then with-

drew one nail from each shoe, thus reducing the number to six in the fore, and seven in the hind shoes; and finding at the end of a year that the shoes of all the horses had been as firmly retained as formerly, I withdrew another nail from each shoe, leaving only five in the fore shoes and six in the hind. I found, however, that six nails would not retain the hind shoes of a carriage horse, without allowing it sometimes to shift; so I returned to seven in the hind shoes, and have continued that number ever since; but five retained all the fore shoes as firmly during the whole of the last year and a half, as six had previously done.

I have invariably directed and superintended the whole operation of shoeing during these experiments; and have always been very careful to mark that the nails were not driven high up in the crust, but brought out as soon as possible; and that they were very lightly driven up before the clinches were turned down, and not, as is generally the case, forced up with all the power that the smith can bring to bear upon them with his hammer. I mention these circumstances to show that my object really was to ascertain how little would retain a shoe, and to what extent the foot might be relieved from the evil of unnecessary restraint; a matter sometimes of great moment, and at all times desirable.

The clinches should not be rasped away too fine, but turned down broad and firm. The practice of rasping the whole surface of the hoof after the clinches have been turned down, should never be permitted; it destroys the covering provided by nature as a protection against the too rapid evaporation of the moisture of the hoof, and causes the horn to become dry and brittle.

Two of the horses alluded to above, worked for some time with only four nails in their fore shoes.

I have detailed these experiments with a view to expose the groundless nature of the fear that expects to cast a shoe at ever step, unless it be held to the foot by eight or nine nails, driven high into the crust. If the presence of a nail in the crust were a matter of no moment, and two or three more than are necessary were *merely useless*, there would be no great reason to interfere with this practice of making "assurance doubly sure;" but it is far otherwise,—the nails separate the fibres of the horn, and they never by any chance become united again, but continue fissured and unclosed, until by degrees they grow down with the rest of the hoof, and are ultimately, after repeated shoeings, removed by the knife.

If the clinches should happen to rise, they must be replaced without delay; as such rising imparts to the nails a freedom of motion which is sure to enlarge the size of the holes,—and this mischief is often increased by the violent wrenching which the shoe undergoes from side to side in the process of removal by the smith.

Now as these holes cannot possibly grow down, and be removed under three shoeings, it will be found that even with seven nails, the crust must always have twenty-one of these separations existing in it at the same time; and as they are often from a variety of causes extended into each other, they necessarily keep it in a brittle, unhealthy state, and materially interfere with the security of the future nail-hold. Unluckily the common practice under such circumstances is to increase the number of nails, with the view of ensuring the security of the shoe, which increases the evil. My object is to show that these shaky places, as they are called, may be relieved by the omission of one or two of the nails, without endangering the security of the shoe. Suppose the number employed to be seven,—to gain such an end they may safely be reduced to five, which is the largest number I have employed for more than two years; and until I discover some good reason for increasing it, is the largest I intend to employ. But I am far from advising the general adoption of this number; for if from imperfect fitting of the shoe, misplacement of the nails, neglect of removing in proper time, or from any other cause, the horse should chance to cast a shoe, the whole blame would be attributed to the five nails, and the poor beast in all probability be doomed to eight or nine for the remainder of his life. I do, however, very strongly advise the adoption of six, knowing them to be fully sufficient for retaining the shoes of all pleasure horses under all circumstances, except perhaps hunters. Since the foregoing was published, Colonel Luttrell, master of the Somersetshire fox-hounds, has informed me that the horse which he rode most frequently last season was shod with six nails only,—not one of which, in consequence of his cutting a good deal, was placed in the inner quarter,—and that he experienced no inconvenience whatever from the plan. If I had entertained the smallest doubt about their efficacy, it would have been entirely removed on the arrival of the Thirteenth Light Dragoons last year in Exeter; for among the horses of that regiment, I found, through the kindness of Lieut. Col. Brunton, who allowed me to inspect the shoeing, strong confirmation of the truth of the position. Here were horses with a variety of feet shod with six nails only, and these all placed in the outside limb and toe of the shoe, all the remainder of the shoe remaining free and unattached to the foot. Mr. Legrew, the very intelligent veterinary surgeon of the regiment, informed me that he had not employed more than six nails for nearly two years, and that the loss of a shoe was a very rare occurrence with them, even on a field day, than which there is scarcely any work more trying to the security of horses' shoes. Any mode of fastening that has proved itself equal to retaining the shoes through a long field-day, in stiff ground, may very safely be recommended as fully sufficient for all ordinary purposes.

The question of the efficacy of six nails for road work is settled, I should think, to the satisfaction of the most skeptical, by the fact of the Thirteenth having done the Queen's escort duty during their year at Hounslow without the loss of a single shoe. Any one acquainted with the rapid pace at which her Majesty invariably travels on the road, will readily admit the sufficiency of the test.—*Miles on the Horse's Foot.*

☞As an evidence of the sport to be had in Texas, we give the following, from the Austin *Gazette:*

"We frequently hear of fine sport in bear hunting in our upper valley. Some panthers, too, and leopards are occasionally killed. But the last specimen is related by the *Liberty Gazette.* The editor says in the last number that Ben. M. Green, of that county, killed in twelve consecutive mornings before dinner, thirteen bears, one panther, one wildcat, and seven deer. No wonder that a Texan can whip his weight in wildcats."

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For the New England Farmer.

MICE, AND YOUNG FRUIT TREES.

MR. EDITOR:—Young orchards are liable to be much injured by mice "girdling" the trees while the ground is covered with snow, and as I have noticed some suggestions in the papers recently, in regard to this matter, I will state, if you please, how I contrived to prevent the evil on my own trees.

Found some old waste tin, such as there is plenty of "lying round loose" in the vicinity of tin shops; cut into irregular sized pieces from five to ten inches square, turned over a narrow strip of edge on two opposite sides so as to "lock" together when bent about the tree, in the form of a hoop or tube. These are readily placed about the tree, and removed again in the spring. It is immaterial about the space inside, between the tube and tree, or it may be well to fill with saw-dust or earth. If slightly pressed down at the base, the tube will not get out of place, and will effectually protect the tree from mice during the winter, at a first cost less than one cent per tree. The tins will last for many years.

Two years ago I had some thrifty pear trees set near the foot of grass terraces. The following winter they were nearly all girdled by mice, so that I lost some thirty trees. I reset again in the spring, and last winter tried the tin tubes, occasionally leaving a tree without any protection. Not a tree with the tin about the base was touched by mice, while those without were destroyed same as previous winter. I have tried treading down snow and piling up earth about young trees, but have found nothing so effectual as the tin tubes. There is no danger of injury to the tree by using them.

Messrs. Cushing & Mack, tin workers of this city, will furnish any quantity of these tubes, to our neighboring fruit-growers, at a trifling expense.

Lowell, Nov. 27, 1855. R.

THE GRAPE.

Its Medicinal Properties—Influence upon the Blood, Liver, Kidneys, and other Organs—Appreciated in Vine-growing Countries—Its efficacy in Dyspepsia—Best Grown in Cities—Manures for—Layering—Pruning—Cuttings—Prices, &c.

The grape is a fruit held in high estimation by those who have been accustomed to use it freely. It is not, however, generally known, perhaps, that in addition to its other excellent qualities, it possesses medicinal virtues which, of themselves alone, would seem to present a sufficient inducement for its cultivation.

In France and Spain, and other vine-growing countries, these medicinal properties of the fruit are well understood and appreciated, experience having demonstrated that a free use of the grape has a most salutary and invigorating effect upon the animal system; that it dilutes the blood, removes obstructions, particularly from the kidneys, liver, spleen, and other important organs, imparting a healthy tone and a vigorous circulation, and increasing the strength of the entire physical economy.

In cases of dyspepsia—a disease which is the foundation of many others—and all diseases of the liver, by which health is not only destroyed, but the mental powers sadly affected, a "grape diet" is almost the only remedy resorted to, and generally with success. It is asserted, on reliable authority, that those who labor in the vineyards, and who are accustomed to partake constantly and liberally of the fruit, are never troubled with that disease. Those who are subject to it in cities, and other places where the grape is not cultivated, on the development of the symptoms of the complaint, resort to the grape regions for the benefit of the "grape diet," or "grape cure," and where the disease has not become confirmed, and the system reduced beyond the power of remedies, a radical cure is often the result.

The nutrimental properties of the ripe grape are considerable, and it is said men may live and labor on it as an exclusive article of food, and without becoming exhausted, for a much longer period than upon a diet of any other species of fruit. It is both stimulating and invigorating, and by retaining the stomach in a healthy tone, promotes the general health, and energy of all the parts.

The culture of this truly valuable fruit should be encouraged. It succeeds well on almost every variety of soil, and will bear lucrative crops with very little care or manure more than may be supplied by every kitchen. At present, no production yields a more liberal profit. The demand for it in our markets is much more likely to increase than diminish for the next half century. Insipid Black Hamburghs, grown in hot-houses, are now selling for one dollar and twenty-five cents a pound, and Isabellas—though very few can be obtained—for more than half that sum.

Nearly all the grapes that are grown near Boston are ordered before they are fairly out of blossom, and at a price scarcely ever less than one dollar a pound for the Muscat of Alexandria and Golden Chasselas, and seventy-five cents, perhaps, for the Black Hamburghs.

This delightful fruit has the advantage, too, of being more successfully raised in the city, than in the country, as the close streets and sunny sides of buildings, or the well-protected yards afford such a shelter as to ensure the ripening of an annual crop of the Isabella, Catawba, Concord, Diana, Amber, and other varieties; while the street-sweepings and the daily wash of the kitchen, compose the pabulum of all others the best suited to their nourishment.

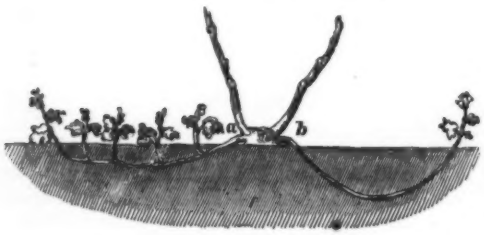
Thousands of the little squares composing the front yards of the city, though containing not more than three or four feet by six in length, if dug out and supplied with proper soil, would sustain a vine which might produce a bushel or two of grapes annually. In such positions, the vines would be highly ornamental, and exert a beneficial influence on the atmosphere the people are breathing. In

some cities this is extensively done. In Rochester, and in Brooklyn, N. Y., flourishing vines are found in every part of the city, in the most compact, as well as the sparsely settled portions; and in late summer and autumn, few of the citizens are unsupplied with this cooling and invigorating fruit.

We have prepared this article at this time to afford the opportunity of suggesting a few things in relation to planting, pruning, cuttings and layers —but particularly that pruning may not be too long delayed.

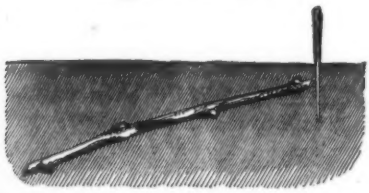
"The object of pruning is to remove all superfluous wood, and thereby strengthen the vine, so as to render it long-lived, and capable of bearing and ripening the proper quantity of grapes." The proper season is, any time after the fall of the leaves, and before the starting of the sap. As the grape vine is very sensitive of the solar influences, a few warm days, even in autumn, or in February, may sometimes set the sap in motion; early pruning is therefore best, certainly as early as the first of March, and earlier if convenient, say in February.

LAYERING GRAPE VINES.



This cut very plainly illustrates the mode of laying down the shoots which spring out near the ground, and from which valuable roots may be obtained. The branch should be sunk some six or eight inches below the surface, in a moist, light and rich soil, and after the first year, half cut off, and after the second, entirely, and then it is an independent plant, standing upon its own roots.

PLANTING CUTTINGS.



Planting cuttings, the pieces being each about twenty inches long, is the easiest, most certain, and best way of propagating the vine, and the cut annexed very well illustrates the manner of doing it.

Reemelin, in his Vine Dresser's Manual, says the "cuttings" should be from healthy vines, not more than ten nor less than three years old, and of the early spring's growth of the previous year. His way is to plant them perpendicularly, making the holes deep enough to have the upper bud half an inch below the surface of the ground.

Success in grape culture mainly depends upon getting a large, healthy and vigorous root penetrating some one or two feet below the surface, and surrounded by numbers of fibrous roots. These stretch away in every direction, through the mellow soil, in search of the nourishment which they require in order to load the vine with fruit. In order to accomplish this, it will not answer to let the vine have its own way, by throwing out numerous branches, and extending some of them ten, twenty, or perhaps thirty feet in a season. This course would give a great crop of wood, and very little fruit. After the cutting has grown one year, it must be pruned back to within three eyes or buds from the ground. This must be done the second and third year, but leaving such side shoots as are desired to extend horizontally. PRINCE says the same general rule is to be observed in pruning grapes that prevails in pruning trees,—to keep the shoots sufficiently apart to admit the sun and air, and not to cross and interfere with each other. We are inclined to think something more is necessary, and as cuts will illustrate much better than words alone, we propose, by-and-by, to take up the subject again, and speak more particularly of the pruning required at the various ages of the vine.

We cannot close now, however, without earnestly recommending to all to make early preparation to PLANT A GRAPE VINE.

For the New England Farmer.

A NEW WASH FOR TREES.

Noticing an allusion to the washing of trees with lye, by Mr. Underwood, in the *N. E. Farmer*, of December 1st, I was reminded of the propriety of again noticing a wash for apple trees which I have used with satisfaction for the past three years Two years ago, I incidentally spoke of it in this journal, and though out of season now, I venture to again call attention to it, hoping that some one else may test it.

Procure *soap-stone dust*, at the workers of soap-stone, sift it to get out the stones, if you choose, mix it up to the consistence of paint, with soap-suds, and add a very little slaked lime, and if you wish to give it an agreeable tint, stir in a very little yellow ochre. Apply this mixture with a brush to your young apple trees in the early part of the summer, and it will prevent the growth of moss, will keep the trunks cool, (which lye does not) and will give them a handsome, neat and healthy appearance.

Lye is dangerous, and requires much experience. Lime is too stiff, and closes the pores of the bark. But the soap-stone dust incorporates with the bark, and in the winter season, presents a handsome buff color, which cannot be rubbed off. There is not the least danger, I think, in the use of this wash, or its incorporation into the bark, as the soap-stone

dust is mostly composed of clay, and the lime and ochre found, in some form, in the soil. Besides, my trees are healthy, and this fact is better than theory.

Perhaps this dust mixed with some other substances, would be found beneficial—for instance, with guano, for pear trees. D. W. L.

W. Medford, Dec., 1855.

ON FEEDING ANIMALS.

Effect of Long-Continued Dairy Husbandry upon the Quality and Produce of the Soil.

And whence does the mother derive all this gluten and bone-earth, by which she can not only repair the natural waste of her own full-grown body, but from which she can spare enough also to yield so large a supply of nourishing milk?

She must extract them from the vegetables on which she lives, and these again from the soil.

The quantity of solid matter thus yielded by the cow in her milk is really very large, if we look at the produce of an entire year. If the average yield of milk be 3000 quarts, or 750 gallons, in a year, (every 10 gallons of which contain bone-earth enough to form about 7 ounces of dry bone,) then by the milking of the cow alone we draw from her the earthy ingredients of 33 lbs. of dry bone in a year. These are equal to 40 lbs. of common bone-dust, or 3½ lbs. in a month. And these she draws necessarily from the soil.

If this milk be consumed on the spot, then all returns again to the soil on the annual manuring of the land. Let it be carried for sale at a distance, or let it be converted into cheese and butter, and in this form exported—there will then be yearly drawn from the land from this cause alone a quantity of the materials of bones which can only be restored by the addition of 40 lbs. of bone-dust to the land. If to this loss from the milk we add only 10 lbs. for the bone carried off by the yearly calf,* the land will lose by the practice of dairy husbandry as much bone-earth as is contained in 50 lbs. of bone-dust—or in 45 years every imperial acre of land will lose what is equivalent to a ton of bones.

After the lapse of centuries, therefore, we can easily understand how old pasture lands, in cheese and dairy countries, should become poor in the materials of bones—and how in such districts, as is now found to be the case in Cheshire, the application of bone-dust should entirely alter the character of the grasses, and renovate the old pastures.

Of the Growing of Wool, and its Effects upon the Soil.

The rearing of wool affords another beautiful practical illustration, both of the kind of food which animals require for particular purposes, and of the effect which a peculiar husbandry must slowly produce upon the soil.

Wool and hair are distinguished from the fleshy parts of the animal by the large proportion of sulphur they contain. Perfectly clean and dry wool contains about 5 per cent. of sulphur, or every 100 lbs. containt 5 lbs.

The quantity as well as the quality of the wool yielded by a single sheep varies much with the breed, the climate, the constitution, the food, and consequently with the soil on which the food is grown. The Hereford sheep, which are kept lean, and give the finest wool, yield only 1½ lbs.; but a Merino often gives a fleece weighing 10 or 11 lbs., and sometimes as much as 12 lbs.

The number of sheep in Great Britain and Ireland amounts to 30 millions, and their yield of wool to 111 millions of pounds, or about 5 millions of pounds of sulphur, which is of course all extracted from the soil.

If we suppose this sulphur to exist in, and to be extracted from, the soil in the form of gypsum, then the plants which the sheep live upon must take out from the soil, to produce the wood alone, 30 millions of pounds, or 13,000 tons of gypsum.

Now, though the proportion of this gypsum lost by any one sheep farm in a year is comparatively small, yet it is reasonable to believe that, by the long growth of wool on hilly land, to which nothing is ever added, either by art or from natural sources, those grasses must gradually cease to grow in which sulphur most largely abounds, and which favor, therefore, the growth of wool. In other words, the produce of wool is likely to diminish, by lapse of time, where it has for centuries been yearly carried off the land; and, again, this produce is likely to be increased in amount when such land is dressed with gypsum, or with other manure in which sulphur naturally exists. Of course, this general conclusion will not apply to localities which derive from springs or other natural sources a supply of sulphur equal to that which is yearly removed.

Of the Practical and Theoretical Values of Different Kinds of Food.

From what has been stated in the preceding sections, it appears, as the result both of theory and of practice, that different kinds of food are not equally nourishing. This fact is of great importance, not only in the preparation of human food, but also in the rearing and fattening of stock. It has, therefore, been made the subject of experiment by many practical agriculturists, with the following general results:

1. If common hay be taken as the standard of comparison, then, to yield the same amount of nourishment as 14 lbs. of hay, experiments on feeding made by different persons, and in differert countries, say that a weight of the other kinds of food must be given, which is represented by the number opposite to each in the following table;—

Hay	10	Carrots, (white)	45
Clover hay	8 to 10	Mangold-wurtzel	35
Green clover	45 to 50	Turnips	50
Wheat straw	40 to 50	Cabbage	20 to 30
Barley straw	20 to 40	Peas and beans	3 to 5
Oat straw	20 to 40	Wheat	5 to 6
Pea straw	10 to 15	Barley	5 to 6
Potatoes	20	Oats	4 to 7
Old potatoes	40?	Indian corn	5
Carrots, (red)	25 to 30	Oil-cake	2 to 4

It is found in practice, as the above table shows, that twenty stones of potatoes, or three of oil-cake, will nourish an animal as much as ten stones of hay will, and five stones of oats as much as either. Something, however, will depend upon the quality of the sample of each kind of food used—which we know varies very much, and with numerous circumstances; and something also upon the age and constitution of the animal, and upon the way and

* It has been estimated that the proportion of bone in the—

Horse	=	.125 of the live weight.
Sheep, *old*, (Merino,)	=	.125 of *live*, 20 of dead do.
	=	.33 nearly of flesh and fat.
Pig, unfatted,	=	.17 of *live* .20 of *dead* do.

form in which the food is administered. The skilful rearer, feeder, and fattener of stock knows also the value of a change of food, or of a mixture of the different kinds of vegetable food he may have at his command—a subject we have considered in a previous section.

2. The generally nutritive value of different kinds of food has also been represented theoretically, by supposing it to be very nearly in proportion to the quantity of nitrogen, or of gluten, which vegetables contain. Though this cannot be considered as a correct principle, yet as the ordinary kinds of food on which stock is fed contain in general an ample supply of carbon for respiration, with a comparatively small proportion of nitrogen, these theoretical determinations are by no means without their value, and they approach, in many cases, very closely to the practical values above given, as deduced from actual trial. Thus assuming that 10 lbs. of hay yield a certain amount of nourishment, then of the other vegetable substances it will be necessary, according to theory, to give the following quantities, in order to produce the same general effect in feeding:—

Hay	10	Carrots (red)	35
Clover hay*	8	Cabbage	35 to 40
Vetch hay	4	Pease and Beans	2 to 3
Wheat straw	52	Wheat	5
Barley straw	52	Barley	6
Oat straw	55	Oats	5
Pea straw	6	Rye	5
Potatoes	28	Indian corn	6
Old potatoes	40	Bran	5
Turnips	60	Oil-cake	2
Mangold-wurtzel	50		

If the feeder be careful to supply his stock with a mixture or occasional change of food—and especially, where necessary, with a proper proportion of fatty matter—he may very safely regulate, by the numbers in the above tables, the quantity of any one which he ought to substitute for a given weight of any of the others—since the theoretical and practical results do not in general very greatly differ.

3. As has been already stated, however, it is not strictly correct that this or that kind of vegetable is more fitted to sustain animal life, simply because of the large proportion of nitrogen or gluten it contains; but it is wisely provided that, along with this nitrogen, all plants contain a certain proportion of starch or sugar, and of saline and earthy matter—all of which, as we have seen, are required in a mixture which will most easily sustain an animal in a healthy condition; so that the proportion of nitrogen in a substance may be considered as a rough practical index of the proportion of the more important saline and earthy ingredients also.

4. It is very doubtful, however, how far this proportion of nitrogen can be regarded as any index of the fattening property of vegetable substances. If the fat in the body be produced from the oil in the food, it is certain that the proportion of this oil in vegetable substances is by no means regulated by that of the gluten or other analogous substances containing nitrogen. The stock farmer who wishes to lay on fat only upon his animals, must therefore be regulated by another principle. He must select those kinds of food, such as linseed and oil-cake, in which fatty matters appear to abound, or mix, as I have already said, (p. 354,) a due proportion of fat or oil with the other kinds of food he employs.

*Both cut in flower.

But large quantities of fat accumulate in the bodies of most animals, only when they are in an unnatural, and, perhaps in some measure, an unhealthy condition. In a state of nature there are comparatively few animals upon which large accumulations of fat take place. A certain portion, as we have seen, is necessary to the healthy animal; but it is an interesting fact, that as much as is necessary to supply this is present in most kinds of vegetable food. In wheaten flour it is associated with the gluten, and may be extracted from it after the starch of the flour has been separated from the gluten by washing with water, as already described (pp. 40 and 45.) In so far, therefore, as this comparatively small necessary quantity of fatty matter is concerned, the proportion of nitrogen may also be taken, without the risk of any serious error, as a practical indication of the ability of the food to supply the natural waste of fat in an animal which is either growing in general size only, or is only to be maintained in its existing condition.

While, therefore, it appears from the study of the principles upon which the feeding of animals depends, that a mixture of various principles is necessary in a nutritive food, it is interesting to find that all the kinds of vegetable food which are raised, either by art or by natural growth, are in reality such mixtures of these several substances—more or less adapted to fulfil all the conditions required from a nutritious diet, according to the state of health and growth in which the animal to befed may happen to be.

An important practical lesson on this subject, therefore, is taught us by the study of the wise provisions of nature. Not only does the milk of the mother contain all the elements of a nutritive food mixed up together—as the egg does also for the unhatched bird—but in rich natural pastures the same mixture uniformly occurs. Hence, in cropping the mixed herbage, the animal introduces into its stomach portions of various plants—some abounding more in starch or sugar, some more in gluten or albumen—some more in fatty matter—while some are naturally richer in saline, others in earthy constituents; and out of these varied materials the digestive organs select a due proportion of each and reject the rest. Wherever a pasture becomes usurped by one or two grasses—either animals cease to thrive upon it, or they must crop a much larger quantity of food to supply from this one grass the natural waste of all the parts of their bodies.

It may indeed be assumed as almost a general principle, that whenever animals are fed on one kind of vegetable only, there is a waste of one or other of the necessary elements of animal food, and that the great lesson on this subject taught us by nature is, that by a *judicious admixture, not only is food economised, but the labor imposed upon the digestive organs is also materially diminished.*—*Johnston's Elements of Chemistry and Geology.*

AMERICAN FACTORY GIRLS.—In one of the factories of Maine recently, the proprietors reduced the wages, whereupon there was a general determination to strike, and as they were obliged to give a month's notice before quitting work, they have in the meantime issued a circular to the world at large in which is the following interesting paragraph:—"We are now working out our notice, and shall

soon be without employment; can turn our hand to most anything; don't like to be idle—but determined not to work for nothing, where folks can afford to pay. Who wants help? We can make bonnets, dresses, puddings, pies and cakes, patch, darn, knit, roast, stew and fry, make butter and cheese, milk cows, feed chickens, hoe corn, sweep out the kitchen, put the parlor to rights, make beds, split wood, kindle fires, wash and iron, besides being remarkably fond of babies; in fact, can do anything the most accomplished housewife is capable of, not forgetting the scoldings on Mondays and Saturdays. For specimens of spirit, will refer you to our overseer. Speak quick. Black eyes, fair foreheads, clustering locks, beautiful as Hebe, can sing like a seraph, and smile most bewitchingly. An elderly gentleman in want of a good housekeeper, or a nice man in want of a wife—willing to sustain either character; in fact, we are in the market! Who bids? Going—gone—gone! Who's the lucky man?"

HOME MADE GUANO.

It is not, perhaps, generally known that the deposits of the hen-house, when suffered to accumulate for several years, without exposure to wet, are very nearly of the same nature as the African and Peruvian guano, of which so much has been said. It is concentrated and caustic manure, and should never be applied to crops without being largely diluted with loam or some other substance, to reduce its strength by diffusion, as it will invariably prove detrimental, if not destructive in its effects. If it be thrown into a heap with six times its bulk of muck, or of good loam, and moistened with water, it will be found highly efficient in promoting the growth and healthy development of any plant to which it may be applied; but it should never be used in its raw and caustic state. A few bushels of this manure, properly diluted and prepared, will be found to produce the results secured by a vastly larger amount of the best stable or barn-yard manure. For vines and garden vegetables it is altogether unsurpassed.

In a recent discussion upon the profits of poultry, evidence was adduced by two or three persons, that the manure from the hen-house produced better results on crops than any other fertilizer used on the farm. In one instance, where about one hundred fowls were kept, sand—mere granular sand—was scattered plentifully on the floor, and upon which the droppings fell. Two or three times a week the surface of this was carefully swept, gathering up a portion of the sand with the droppings and depositing the whole in barrels. In the spring this was in the most convenient form to be taken to the fields and applied to the hills where corn was to be planted, and on a large field where excellent barn-yard manure was applied at the rate of twenty ox-cart loads, or about eight cords, per acre, the portion where a single handful of the home-made guano had been applied was altogether stouter, and the corn earlier and more sound. But, independently of this source of profit from fowls, the discussion to which we refer afforded satisfactory proof to us, that no product of the farm yields a better profit than its fowls.

HOW APES CATCH CRABS.

A traveller in Java relates the following amusing scene, which he witnessed in the company of some of the natives:

After walking close up to the old campaign, they were upon the point of turning back, when a young fellow emerged from the thicket, and said a few words to the mandoor. The latter turned with a laugh to Frank, and asked him if he had ever seen the apes catch crabs. Frank replied in the negative, and the mandoor taking his hand, led him gently and cautiously through the deserted village, to a spot which the young fellow had pointed out, and where the old man had formerly planted hedges, rendering it an easy task for them to approach unobserved.

At length they reached the boundary of the former settlement—a dry, sandy soil, strip of beach, where all vegetation ceased, and only a single tall pandanus tree, whose roots were thickly interlaced with creeping plants, formed as it were the advanced post of the vegetable kingdom. Behind this they crawled along, and cautiously raising their heads, they saw several apes, and at a distance of two or three hundred paces, who were pertly looking for something as they walked up and down the beach, while others stood motionless.

It was the long tailed, brown variety, and Frank was beginning to regret that he had not his telescope with him, to watch the motions of these strange beings more closely, when one of them, a tremendous large fellow, began to draw nearer to them. Carefully examining the ground, over which he went with all fours, he stood at intervals to scratch himself, or to snap at some insect that buzzed around him.

He came so close that Frank fancied that he must scent them, and give the alarm to the other monkeys, when suddenly passing over a little elevation covered with withered reedy grass, he here discovered a party of crabs, parading up and down on the hot sand. With a bound he was amongst them, but not quick enough to catch a single one; for the crabs, though apparantly so clumsy, darted like lightning into a quantity of small holes or cavities, which made the ground here resemble a seive, and the ape could not thrust his paws after them, for the orifice was too narrow.

The mandoor nudged Frank gently, to draw his attention, and they saw the ape, after crawling once or twice up and down the small strip of land, and peeping into the various holes, with his nose close to the ground, suddenly seating himself very gravely by one of them, which he fancied most suitable. He then brought round his long tail to the front, thrust the end of it into the cavity, until he met with an obstacle, and suddenly made a face which so amused Frank, that he would have laughed loudly, had not the mandoor raised his finger warningly—and directly the ape drew out his extraordinary line with a jerk. At the end of it, however hung the desired booty, a fat crab by one of its claws, and swinging it round on the ground with such vi-

olence as to make it loose its hold, he took it in his left paw, picked up a stone with the other, and after cracking the shell, devoured the savory contents with evident satisfaction.

Four or five he thus caught in succession, on each occasion when the crab nipped him, making a face of heroic resignation and pain, but each time he was successful, and he must have found in the dainty dish, and the revenge for the nip, abundant satisfaction for the pain he endured, or else he would not have set to work again so soon.

Thus then the ape quite engaged with the sport, and without taking his eyes off the ground, had approached to within about twenty paces of the party concealed behind the pandanus tree. Here, again, the ground was full of holes, and looking out the one he conjectured to be the best, he threw in his line once, and probably felt that there was something alive within, for he awaited the result with signs of the most eager attention.

The affair however lasted longer than he anticipated; but being already well filled by his past successful hauls, he pulled up his knees, laid his arms upon them, bowed his head, and half closing his eyes, he assumed such a resigned and yet exquisitely comical face, as only an ape is capable of putting on under these circumstances.

But his quiet was destined to be disturbed in a manner as unsuspected as it was cruel. He must have discerned some very interesting object in the clouds, for he was staring up there fixedly, when he uttered a loud yell, left hold of his knees, felt with both hands for his tail, and made a bound in the air, as if the ground under him was growing red hot, At the end of his tail, however, hung a gigantic crab; torn with desperate energy from his hiding place, and Frank, who could restrain himself no longer, then burst into a loud laugh.

The mandoor at first retained his gravity; but when the ape, alarmed by the strange sound, looked up and saw men, and then bounded off at full speed, with his tormentor still dangling at the end of his tail, the old man could no longer refrain either, and they both laughed till the tears ran down their cheeks.

The ape, in the meanwhile, flew across the narrow strip of sand, followed by all the others, towards the jungle, and in a moment after, not a single one was visible.

WINTER SHELTER FOR ANIMALS.

Solomon says—"A righteous man regardeth the life of his beast." It is remarkable, that on a very large majority of our farms, far less attention is paid to the comfort of our domestic animals during the long period of their confinement during the winter months, than the well-known humanity of our farmers, in other matters, would seem to insure. LIEBIG, the distinguished German chemist says that our clothing is an equivalent for food; and every discerning and reflecting person must have received a very striking and impressive corroboration of the truth of the observation in the plain fact that an animal comfortably sheltered, and provided with litter or bedding, consumes, during winter, less food by nearly one-half than an animal of the same size and kind will require if uncared for and exposed. We have frequently been surprised and shocked by what appear to be an unmerciful regardlessness of the comfort and health of their domestic animals, particularly their young stock.

Every correct farmer will study the comfort of every animal under his care—not only from a common principle of humanity, which is, or should be, instilled into him by the gentle and humanizing character of his pursuits, but from a healthy and laudable regard for his own interests. As a facetious writer once said, "misery never yet fattened any one, and cold and hunger are miserable bedfellows." Good barns, comfortable sheds, close "cotes," for sheep and swine to go to when they please, are among the most elegant embellishments of which a homestead, in a rural districts can possibly boast.

GARDEN SEEDS.

There is a matter to which I wish to call the attention of the public, and especially that portion of it who deal in garden seeds; and that is, the bad quality of many of the kinds that they send round among us. At five cents a paper, which, on an average contains each not more than a table spoonful, they can well afford to furnish us with the very best of new seeds, indued with full and active vitality. But I am sure some do not, and I hazard the remark that none take the pains they ought to take. The loss of 5, 10 or 15 cents is not much; but that is by no means the whole loss. There is the loss of the labor of preparing the ground, of sowing the seed, of much of the manure used, and of the expected crop. And there is the vexation, which, in this world, which is so full of vexations, ought not to be inflicted upon us, if seed-sellers can well help it. The complaint does not proceed from one only, but from many.

There is hardly any seed which does not lose a portion of its vitality; some lose all if kept over more than one winter. It is pretty well known that seed-sellers take back in the fall the seed unsold in the preceding spring, and the suspicion is rife among us that the seed taken back is offered again, and perhaps a third or fourth time. The papers bear no date of the year when the seed was raised; and why do they not?

I fear the seed-sellers do not take sufficient care to put up only the best seed. In all cases, where the plant is biennial, they should use none but large healthy roots; and when it is umbeliferous, like the parsnip, or branching, like the beet, they should put up none but such as is borne on the central umbels and the principal branches. If they were to remove the inferior umbels, (the umbels only,) and the tops of the inferior branches, at the time of blossoming, or before, the umbels and branches left would bear better seed; and those removed, would probably, if left, have borne only abortive seeds.

It has been said that cabbage seed, raised from cabbage *stalks*, the head being removed, seldom produce plants that head well. So reason teaches.

And it has been said also that squash and pumpkin seeds, taken from the stem end, are more apt to produce fruit similar to the parent than those taken from the blossom end. It is well worth while

to ascertain if this saying is correct. Reflection would probably suggest a reason why it is so.

This spring, more complaint has been made of the bad quality of parsnip and onion seeds than of any other; but the beet beds show many vacancies.

Doubtless the failure of many seeds is due to the ignorance or carelessness of the sower. It will take but a few lines to remark that, in a dry season, covering the seed sown, for three or four days, with a board or a piece of old carpet, will sometimes cause it to vegetate, when otherwise it might not.

Can you, Mr. Editor, give a list of the seeds which lose their vitality soonest, and of other seeds which retain their vitality longest? Honest seed-raisers, and all are honest, for aught I know, would be glad to learn. Yours, &c., S. HALE.

Keene, N. H.

We fully agree with our correspondent, that there is great need of improvement in the quality of garden seeds. We have long been aware that if there is anything in which the public are humbugged, it is in garden seeds. But the cause must not be laid to the established seed dealers; it belongs wholly and exclusively to the purchasers. They require cheap seeds, and always buy of those who sell the lowest, and of course, they get them; for no honest, upright seedsman could supply pure fresh seeds at the unusually low prices at which they are now sold.

The truth is, the mass of the people buy garden seeds as they would a pound of sugar or a bushel of corn; the cheapest always finding the most customers. The standing of the seedsman is no consideration, and the seeds of an unknown dealer are just as readily taken as those from the merchant who is well known, and has a reputation to lose. The competition among dealers, and the eagerness to secure customers, has lowered prices, and as they are below what fresh seeds can be raised for, they must of course be adulterated to afford a living. The dishonest seedsman, if there are any such, must pursue this course, or purchase, hap-hazard, any seed offered for sale, of which there is always an abundance, without knowing anything about them. Probably not one in ten of those who buy seeds are aware that the best seedsmen, who can be relied upon, have their seeds raised expressly for them, and often furnish the stock, or know that it is pure; it is the only way they can be certain of their genuineness. The only remedy is, therefore, to deal with *first rate* houses, with men who are known, and to be willing to pay a fair price for a pure article. If, however, they must be had at a low price, purchasers must expect to have them mixed with old seeds; for it is the only way in which the dealer can compete with the cheap seedsman. Our advice is, to buy nothing in the way of seeds, plants or trees, because they are cheap.—*Hovey's Magazine.*

SUPERPHOSPHATE OF LIME AS A FERTILIZER.—We were induced, last spring, on the recommendation of a friend, to use some superphosphate of lime upon some corn which we were planting. In order to make the experiment fairly, we left one row of corn without any of this fertilizer. The rows in which we placed the superphosphate came up the first, grew the rankest, and looked the best all through the season. A week ago to-day we harvested the crop, and, as all the piece was equally manured before the superphosphate was applied, and had equal culture, we give the result of our experiment. Gathering and husking the row without superphosphate, we found they weighed 36 pounds, not ten ears of which were hard or perfect, having suffered from the frost some four weeks ago, while the *next* was perfectly matured and the ears weighed 60 pounds. We are convinced that the superphosphate saved our entire crop of corn, although we used only a table-spoonful in a hill. What will our neighbor of the *New England Farmer*,—which is one of the best agricultural and family newspapers in the world,—say to this?—*Chelsea Telegraph.*

REMARKS.—Your neighbor of the *N. E. Farmer* thinks the experiment a very favorable one, and would advise you to continue it next year, and see if the result will be the same. We have raised between fifty and sixty bushels of corn to the acre, this year, where only a handful of superphosphate was applied,—but the land was heavily manured last year.

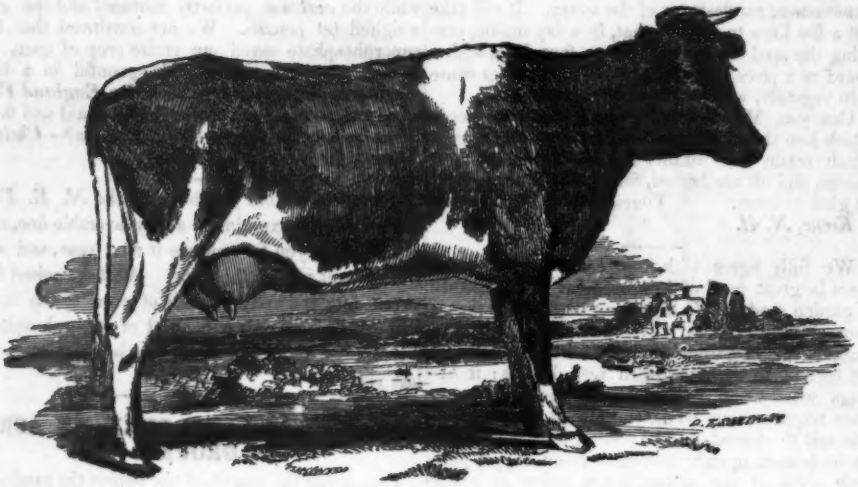
THE YIELD OF LESS THAN AN ACRE OF GROUND.

I see going the rounds of the papers the products of a two-acre farm, amounting after nine years' preparation to the annual sum of $133,20; and the writer concludes he "will have his reward, if the account he gives, will stimulate others to do the like out of nothing." To add a further stimulus I give the following account of the productions of a house-lot containing but 139 perches and 83¼ feet. At least one-third of this is taken up by house and out-buildings, and about one-third of the balance too steep for cultivating anything but grass and trees. It came into my possession four years ago, with the portion now cultivated stripped of its soil by grading to fill up terrace walls. There are three of these, 5 to 8 feet high. It has produced during the past season:

306 quarts of Strawberries,	20 cts.,	$61,00
60 bunches Asparagus,	5 cts.,	3,00
200 lbs. Grass,	$1	200
38 quarts Gooseberries,	8 cts.,	3,04
16 quarts Currants,	6 cts.,	96
20 quarts Peas,	8 cts.,	1,60
27 quarts Raspberries,	15 cts.,	4,05
10 bunches Rhubarb	6 cts.,	60
6 quarts Cherries,	10 cts.,	60
5 bushels Grapes,	$2	10,00
10½ bushels Peaches, extra,	$2	21,00
4½ bushels Peaches, common,	50 cts.,	2,25
Grass, second crop,		1,00
470 Peach trees, 1 year, bud.	fine, 8 cts.,	37,60
100 Gooseberry trees,	5 cts.,	5,00
1½ bushels Onions,	75 cts.,	1,12
2 lbs. Hops,	40 cts.,	80
8 Gourds,	5 cts.,	40
12 Grape Vines, 1 year,	10 cts.,	1,20
Total		$157,42

Every tree, shrub and plant has been set by my own hands—excepting about one dozen and three old peach trees—within the four years, and had my attention only before breakfast and after supper. In addition to my own labor, the whole lot has not received more than 20 days' work during the season, perhaps less.

If the "*New England Farmer*," or any other can beat this, let us hear from them.—ROBERT ARTHURS, *Pitt Township, Alleghany Co., Penn.*—*Western Agriculturist, Pittsburg.*



JERSEY COW, FLORA.

Among the efforts made to introduce better milch cows to our farms, both for milk and for dairy purposes, the *Alderney*, or *Jersey* cows, have taken quite a prominent place; but their possession has not become general; a few enterprising persons, only, having purchased them, who can afford to experiment, and lose, if such should be the result, without having the loss materially affect their other operations. In many cases they have proved excellent, but not in all.

Mr. Lawrence, in his general treatise on cattle, gives as a general description of the cows, that they are light red, yellow, dun, and fawn-colored; short, wild-horned, deer-necked, with a general resemblance to that animal; thin, hard, and small-boned; irregular, and often very awkwardly shaped. He thinks they are among the best milkers in the world, as to quality. He had been assured that an Alderney cow that had strayed from her owner, made *nineteen* pounds of butter a week, each of the three weeks she was kept by the finder; and the fact was held so extraordinary, as to be thought worth a memorandum in the parish books. This product however, has been equalled, we believe, by some of the common, or native cows of New England. The reports in the transactions of our country agricultural societies have frequently shown a product of one pound of butter, from *four* quarts of milk.

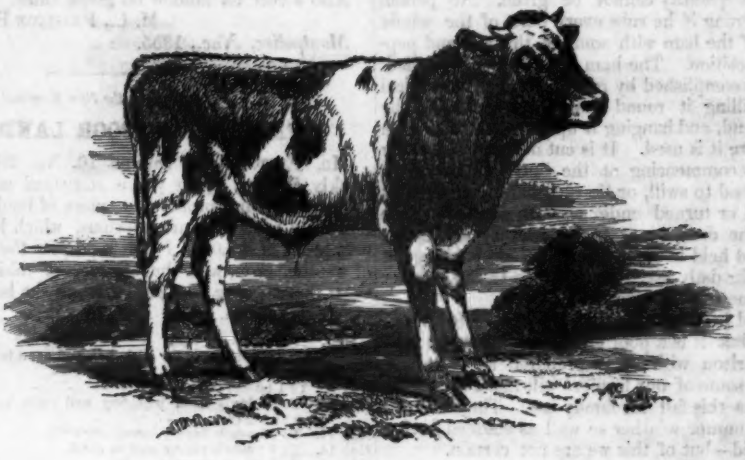
Before coming to a conclusion of their true value, we think they must become more common on our farms, so as more generally to learn their qualities, both for milk and beef, and their adaptation to our climate, and pastures. In the meantime, we are happy to express our obligations to those who are willing to breed and test them.

The cow from which the above engraving was taken, is the property of JONATHAN FRENCH, Esq., of Roxbury, who has furnished us the subjoined account of her.

Flora, the Jersey cow, is four years old last September, and weighs nine hundred pounds. She was imported, September, 1854, direct from the Jersey Islands; was then with calf, which was dropped last March.

The largest quantity of milk she has given in any one day, was thirteen quarts. As much of the milk as was required for the use of the family to make up the deficiency of another cow, was reserved and the balance made into butter, giving, for several weeks, *nine* to *ten* pounds! After calving, she was sick and did not produce the quantity, or quality of milk, which may be expected from her when fully acclimated.

A GREENLAND LADY'S DRESS.—This consists of seal-skin stockings with the fur next to the foot, and of such length as to reach above the knee. Over these is drawn a pair of seal-skin boots, with the fur outside, so that the boots are in truth a seal-skin of double thickness, with the fur outside and inside too. The pantaloons are of seal-skin, something in the form of old-fashioned knee breeches. A jacket of seal-skin, fur inside, fits close to the body. The outer habiliment is a loose jurrah



CZAR, CALF OF THE JERSEY COW, FLORA.

AGE 8 MONTHS. WEIGHT 500 LBS.

of calico. Around the neck is a ruff of dog's fur, but underneath this is a white or black handkerchief tied snug to the neck. The dress when ornamented is quite a handsome one, as it is the best of the bloomer style.

HOW TO CURE HAMS.

As this is about the time when most farmers are preparing their hams, beef tongues, &c., for future use, a few suggestions on the subject will undoubtedly be acceptable.

We would not advise the use of saltpetre in curing meat—it is entirely unnecessary, and it is dangerous. Many of the other suggestions below are valuable:

PORK HAMS.—When the meat is perfectly cold, after being killed, it is ready to be salted. The salt should be of the best quality—solar evaporated, ground fine, is, perhaps, the best kind—and to every pound of it one ounce of fine white sugar should be added. The hams should be laid upon a table or bench, and every part carefully rubbed with this salt; then they should be laid in a dry tub until the next day. The same operation should be repeated every day for four days, taking care to turn the hams in the tub every time they are laid down. After this, the operation may be repeated once every two days for a week, when it will be found that the meat has absorbed sufficient salt to preserve it for family use. After this it may be slightly smoked, or hung up to dry. Hams intended for sale should be once rubbed over with the salt, as described, then placed in a strong pickle. This should be made of the best salt—10 lbs. to the 100 lbs. of pork, with one ounce of sugar to the pound added, and half an ounce of saltpetre to the ten pounds of salt, all boiled for about fifteen minutes, and the froth skimmed off; it is then set aside to cool. When cold, the hams may be placed in this pickle and left for three weeks. They should then be lifted, hung up for three or four days to drip, and are then fit to be smoked.

For family use, instead of smoking the hams after they are salted and dripped, if they are simply rubbed over with black pepper and hung up for a few days to dry, the meat acquires a very fine flavor. A mild smoky taste may be given to hams without smoking them, by simply smoking the barrels in which they are to be laid down in pickle. This is a good plan, because the taste of the smoke—which some persons like—is given to the meat without discoloring it. Sides of pork should be treated in the same manner as hams laid in the pickle; but for home use, during winter, by merely rubbing the sides with salt every day for a week or ten days, then hanging them in a moderately cool place to dry for use, the meat is much sweeter than that laid down in pickle. This information we have derived from one long engaged in curing pork, and we have satisfied ourselves, practically, of its correctness. The amount of salt for rubbing on the meat does not require to be stated; no person can go wrong by rubbing on too great a quantity. The sugar is used for the purpose of nullifying the bitter taste of the saltpetre, and also that of any *bitterin*—sulphate of magnesia or sulphate of soda—that may be in salt.

BEEF HAMS.—The finest beef hams are made by cutting out the entire bone of the hind-quarter, then rubbing in the salt and sugar, the same as described for pork hams, turning them over and rubbing them every day for one week. After this they are hung up to drip in a cool place for three days.

They are now taken down and rubbed all over, on a table or bench, with some fine salt, black pepper, and cloves, all ground together. About one ounce each of salt and pepper, and half an ounce of cloves, are sufficient for thirty pounds of meat, but the exact quantity cannot be given. No person can go wrong if he rubs every part of the whole surface of the ham with some of this salt and pepper composition. The ham is now fit to be rolled. This is accomplished by rolling it into cylindrical form, swilling it round from the narrow to the thickest end, and hanging it up to dry for about ten days before it is used. It is cut in round slices for frying by commencing at the butt end. A stout cord is used to swill, or tie such hams, and it must be looped or turned under on both sides along the coils of the cord, so as to have every coil firmly bound and held in place when the ham is being cut in slices for daily use. Hams made in this manner are the finest in the world—a luxury.

Smoked beef is to be found in abundance in our markets, but it is a poor eatable of the meat kind in comparison with beef prepared as described. We hope some of our farmers will make some such beef hams this fall for family use. They will not keep in summer weather so well as smoked beef—so it is said—but of this we are not certain.

For the New England Farmer.

REMEDY FOR THE ONION MAGGOT.

DEAR SIR:—I noticed in the *New England Farmer*, a question, asking "What could be done to get rid of the onion maggot?" I will give you my experience. Some few years since, I should think the second or third year of the potato rot, my gardener came to me and told me the onions were being eaten up by maggots at the root; said he had put ashes, and also lime on them, but they did no good. I went to the garden and found, as he said, the roots full of maggots. I then examined the sound ones, and found the joints full of fly-blows, quite a number in each joint close to the main stock; they were then from six to eight inches high. I told the gardener first to water the plants with the watering pot until quite wet, and another to sift the ashes thickly over them; he did so, and saved every one that was left standing. I never had a better crop, and have continued to grow them on the same ground ever since, and have never lost any.

I had a bed of top onions paralled with the others,—I found fly-blows on them, and also where they had hatched and gnawed a circle round just enough to leave a white mark, but the onion tops were too hard for them to penetrate. I then thought, as the potatoes were rotting, I would examine them. I found where the vines were decayed, the roots were full of the same kind of maggots, and where they were not decayed, there were unmistakable marks where they had tried, without success, to gnaw into the heart of the vine.

I noticed that spring that there were vast swarms of slender black flies in the garden, and have no doubt they blew the onions. The currant bushes were also badly handled by them, or some other insect. One of my neighbors soaked a paper of onion seeds and found 40 live maggots on the top of the water, very small, but discernible with the naked eye.

Can you, or any of your correspondents, tell of any method to destroy the inch worm, green and black, that eats up all the foliage of the currant bushes? They have eaten ours two seasons; the second season the bushes died; there are myriads of them.

Also a cure for mildew on grape vines.

M. C., PAVILION HOUSE.

Montpelier, Nov., 1855.

For the New England Farmer.

FARMING ON POOR LAND.

MR. EDITOR:—In volume 10, No. 28 of the weekly *Farmer*, I gave you a statistical account of the expenses and profits of a piece of land which I had tilled for two years previous, which left me a nett profit of $8,07. I now send you the amount of another crop, with the expense of raising it, to show that farming *does pay*, even on the hard lands of our hilly town.

1855.	*Dr.*
May 7—8. To 1½ days' labor with boy and oxen to plow and harrow,	$3,00
May 8. To 1 bushel wheat, sown,	2,50
May 14. To 1 day's labor with boy and oxen to plow and harrow,	2,00
May 14. To 2 bushels barley sown,	1,75
May 14. To 4 bushels clover seed in chaff,	50
May 14. To 6 qts. herdsgrass seed,	75
May 14. To 30 lbs. guano and 2 bushels ashes sown,	1,30
Aug. 14. To 1 day's labor mowing barley and cradling wheat,	1,50
Aug. 16. To 1 day's labor, binding wheat and getting in barley,	2,25
Aug. 21. To getting in 33 stooks wheat,	50
Oct. 11. To threshing 25 bushels grain at 1s. per bushel,	4,17
Total expenses in 1855.	$20,22

1855.	*Cr.*
By 8 bushels of wheat at $2,50 per bushel,	$20,00
By 17 bushels barley, at 87½ cts per bushel,	14,87
To 1 ton wheat straw, at $6 per ton,	6,00
To ¾ of ton of barley straw, at $9 per ton,	6,75
Add profits on previous crops,	8,07
	$55,69
Deduct expenses	20,22
Leaving a balance in my favor, of	$35,47

Showing a fair remuneration for the use of the land. I had a small crop, owing to the heavy rains during the month of July, the land being naturally wet and heavy.

I ask you to publish the above to show to our brother farmers that farming does pay, even with ordinary crops.

HARVEY BARBER.

Warwick, Nov., 1855.

NUTRIMENT IN THE APPLE.

With us (says the editor of the *Albany Journal*) the value of the apple, as an article of food, is far underrated. Besides containing sugar, mucilage and other nutriment matter, apples contain vegetable acids, aromatic qualities, &c., which act powerfully in the capacity of refrigerants, tonics and antiseptics; and when freely used at the season of mellow ripeness, they prevent debility, indigestion, and avert, without doubt, many of the "ills that flesh is heir to." The operators of Cornwall, England, consider ripe apples nearly as nourishing as bread, and far more so than potatoes. In the year 1801—which was a year of much scarcity—apples, instead of being converted into cider, were sold to the poor; and the laborers asserted that they could "stand their work" on baked apples, without meat,

whereas a potato diet required meat or some other substantial nutriment. The French and Germans use apples extensively, as do the inhabitants of all European nations. The laborers depend upon them as an article of food, and frequently make a dinner of sliced apples and bread. There is no fruit cooked in as many different ways in our country as the apple, nor is there any fruit whose value as an article of nutriment, is as great, and so little appreciated.

For the New England Farmer.

SPECIAL MANURES.

What scientific agriculture will ultimately do for farmers, time will show; what it *has* done, may be seen on the farms of many of the most inveterate opponents of the improved agricultural movement.

Let any one consider the amount of meadow mud, muck and similar material daily used on New England farms, and he will find that the manurial resources of farmers have been more than doubled; even those persons who leave their manure to be dried by the sun and washed by the rain, now believe they decidedly gain by such admixtures.—Thousands, whilst they studiously condemn all agricultural newspapers, lectures and books, mix the deposites from pond and road-side, with the cattle droppings, because neighbor A or B, who do derive information from such sources, does so and is benefited.

But even this simple operation is not fully understood in its scientific bearings. I will not enter into the detailed analyses of peat and pond mud; it is enough to know that it is largely composed of water and carbonaceous matter, and some valuable salts (mineral matter) in a crude state. That so long as it is submerged in water, no change can take place in its constituent parts which will set free the harmless and valuable portions, and render innoxious the hurtful.

We will suppose we have the mud dug, and treat of the best method of using it, and some of the results. When first dug it is as soft as cheese, and full of water; to remove it then to the barn-yard necessitates the removal of a large quantity of water; do we need this water? No—because we wanted the peat to be sponge-like to absorb the surplus water of the manure, which it cannot do if already saturated.

A winter's frost or summer's sun settles that, breaks it, expands it, and leaves it light and dry; now put it at the bottom of the manure heap, and we have an absorbent that will not only take up the refuse water, but will hold it till wanted. Postponing the consideration of the chemical components of the peat, now saturated, let us consider how most farmers will use the pile of compost accumulated during the year; the compost made of horse, cow and pig fæces, perhaps some night soil, and the before mentioned peat. In a section of country like this, each farm will have some upland, and some reclaimed meadow, all or a part of which will be in grass; the so-called good farmer, during the frozen weather, will haul out his manure and leave it in piles on his grass land, ready to be spread in the spring as a top-dressing. He knows that so piled and spread, it will lose some of its value by evaporation, but he knows such work can be properly done at no other time, from the tender state of the ground, and too great hurry of work. If he is as good a farmer as we have supposed, he will dress this land with not less than eight or ten cords per acre, to be renewed yearly, or less often, as his experience may deem best.

Let us now ascertain the benefit this compost thus made will do his meadow land. We know, to a moral certainty, it will give him the next summer from two to three tons of hay to the acre, while the same land not manured will only give a ton; no one doubts the wisdom of his getting the largest possible return from his acre, consistent with an economical outlay, and he tells us that the hauling and mixing of this compost has been done at odd jobs, and really cost but little; the question of cost we will reserve for the present, and inquire what has been the scientific result of his labor.

Peat meadow (i. e. reclaimed meadow,) is composed of peat which has been drained of its superfluous water and top dressed with more or less gravel. The water, scientifically, flooded the peat, kept out the air, which by means of its oxygen would have affected the mineral matters in the mud, and would have so acted upon them chemically as to make them (technically) sweet, and capable of contributing towards a healthy vegetation; the gravel served to give greater strength and consistency to the mud, and increased the drainage, by the admixture of its stones and larger particles, and also furnished some lime, potash and silica and other ingredients to the active carbonic acid of the peat itself. Now what is the peat?

It is a body composed of about 85 per cent. of water, 14 per cent. of carbonic acid and ammonia, and 1 per cent. of lime, potash, &c., the water and carbonic acid being, as we see, in excess, the lime, &c., small, the ammonia and phosphate of lime very small in amount. The gravel will afford a large amount of silica, a small portion of lime, differing in that respect according to the locality of the gravel, and little or no ammonia or phosphate of lime. Now without entering into the discussion whether ammonia or phosphate of lime is the more important agent in vegetable growth, let us assume they are both necessary, because both have been found, in all carefully tried experiments, to conduce to the development of vegetation; if we examine a number of analyses of plants, we shall find that in all cases water and carbonic acid are the largest contributors to their structure, and these we have to an inexhaustible amount in the peat; but we no less surely find that these two agents, alone, can never produce a vegetation able to sustain animal life.

Having this starting point, we see that by the same analyses, plants in the aggregate take a very large amount of various mineral matters from the earth; a ton of hay, for instance—280 lbs. of water, 1600 carbonaceous matter, 21 1-10 lbs. lime, 26 lbs. potash, 32 7-10 lbs. ammonia and phosphate of lime; and by comparing these amounts with the contents of an acre of peat, we see that a few years would exhaust the peat, even if we could squeeze all out of it which it contains, an impossible process, therefore we feel the necessity of supplying these ingredients to the meadow land to ensure a large crop of hay; and inasmuch as the farmer gets the large amount of hay year after year, it is evident to superficial reasoning that he must have supplied these mineral matters; he would seem then to have acted scientifically—has he? No, because though he may have supplied the ingredients in

whole or in part, he has not supplied them according to any definite system, or with the greatest economy; his top-dressing could not have cost him less than $25 per acre, and he got an increase of 1½ tons of hay, or $30 in return. If we can show him that this end could have been gained for $9, he would admit that he lost $17 by the operation, which the same scientific reasoning will show to be a most unscientific operation.

If any one has been interested enough to follow thus far, it will be easy to show the method of operation hereafter. R. M. C.

Lexington, Nov. 25, 1855.

For the New England Farmer.

"BUTTER STOCK."

Can you, Mr. Editor, inform me whether or not any of this famous stock is now to be had? For several years last past, they have been trumpeted abroad, in every possible form, up to the time of the great National Show, in your city, and since, until the Devons of Middlesex had become, in the minds of readers of newspapers, as distinct a class of animals as any other. If my recollection is right, there has been a proposal to sell all these animals, by their proprietor, that others may be benefited thereby. Whether or not such sale has been made, I am not advised. I have looked in vain for an account of it. If people believe what has been averred about these animals—that a gallon of their milk would produce a pound of butter, in the month of October, and a gallon and a half at all other seasons of the year—this being twice as well as may be expected of other good stock—then it must be that they would sell for prices corresponding.—I expected that individual animals would have run up to two, three and five hundred dollars. Certainly cows that will give milk of this quality, and make certain that their offspring will do the like, would be worth these prices. More than this, he who has had the sagacity to distinguish and grow up such a stock, should be worthy of distinguished remembrance. I am well satisfied of the butter-making qualities of the Jersey animals, kept by Mr. Motley, Mr. Reed and Mr. Henshaw; and that these animals will produce milk that will yield two pounds of butter a day, when fed in the best manner. These are the best "butter stock" I have ever seen. Their looks show their ability. But that the plump Devon can be made to do this, I have yet to learn. Possibly, under very peculiar circumstances, milk can be stripped from them, four quarts of which will yield a pound of butter. But before I can fully credit such statements, let them be backed by never so strong arguments, my name will cease to be THOMAS.

Nov. 29, 1855.

THE VALLEY FARMER.—E. ABBOTT, Esq., late Editor and Proprietor of the *Valley Farmer*, published at St Louis, has sold the establishment to NORMAN J. COLMAN, Esq., of that city. Mr. Abbott, who has long done good service in the cause, will remain as Associate Editor. Mr. Colman announces that he shall devote his time to the interest of the *Farmer*, and shall introduce important improvements into the paper.

For the New England Farmer.

TO THE "PEASANT BARD."

How art thou, friend, this autumn weather—
In spirits—light, as lightest feather?
From what we learn of ye, we gather,
Thou goest it prime;
And if, perchance, we meet together,
We'll have a time.

Thou young "*potato-digging*" loon!
How cam'st thou by so rich a boon?
Namely, the Muse's golden spoon,
At which folks stare;
One wouldn't have thought it—an' such shoon,
As thou dost wear!

Moreover, what dost feed upon?—
We do conjure thee—tell us, man;
And eke, what stream from Helicon
Flows down thy gullet?
Then, swifter then Ahimaaz ran,
Hero's haste, our skillet.

But lately 'twas, we chanced to see
A rare production, penned by thee;
And heard it asked, respecting ye,
In plain set terms,
"Have we up in the hill country,
'Mongst us a Burns?"

Quite glad indeed, were we, to hear
Such joyful news, spread far and near;
Though aged quite, and as we fear,
Laid on the shelf,
Thus introduce, in method queer,
Our humble self.

All summer long, have we been toiling,
About the farm, and delving, moiling,
'Twixt rain and sunshine, dripping, broiling,
To gain a living;
One's system needs a little oiling,
Against Thanksgiving.

November's howling "o'er the lea,"
Disrobing plant, and flower and tree;
The storm-king's driving fast and free,
Young childhood's wonder,
And our poor bardship's for a spree
A "Doesticks Bender."*

Fie! on those "melancholy days,"
That Bryant sings in sweetest lays;
However bright the poet's bays,
Or nobly worn,
Methinks, such times the dapple greys
Might serve one's turn.

We've chanted in our Harvest Home,
And made all snug for months to come;
Are ready for the fife and drum,
Of social chat,—
Discussions—Lectures—Lyceum,
We're in for that.

* * * * * * *

Farewell! my brother of the plow—
My blessing, take it—even now;
Such welcome would I likewise show
To thee and thine,
As manna welcomed was by Jew,
In auld lang syne. E. H. G.

Stockbridge.

* A "Doesticks Bender,"—alluding to a humorous article in the *N. Y. Evening Post*, entitled "Doesticks on a Bender."

WHY BUTTER IS DEAR.—Is the following, from a New York city paper, true or fabulous?

"There is a fine pasture all over the country now, and the price of butter ought to be down to a shil-

ling a pound. Why isn't it? Because the women and girls don't know how to make it. For twenty years past the girls' butter-making education has been sadly neglected. They can play the piano, but cannot churn; can dance, but cannot skim milk; can talk a little French, but don't know how to work out the buttermilk. The women who made the butter in Westchester, Dutchess and Orange Counties twenty years ago, are passing away, and there are none to take their places. That's why butter is high."

For the New England Farmer.

PORTRAITS FROM THE FIELD AND FARM-YARD.

BY WILSON FLAGG.

THE CHICKADEE, OR BLACK CAP TITMOUSE.

There are but few individuals who have spent their winters in the country who would not agree with me that, to the lively notes of the Chickadee we are indebted for a great part of the cheerfulness that attends a winter's walk. Though he is not reckoned among the singing birds, there is a variety in his notes, uttered at different times, which, if repeated in uninterrupted succession, would form one of the most agreeable of woodland melodies. The sounds from which he has derived his name seem to be a species of call-notes, and are probably designed by nature to enable these little birds, while scattered singly over the forest, to signalize their presence to others of their own tribe. Hence it may often have been observed, that when this call is rapidly repeated, a multitude of these birds will immediately assemble around the one that gave the alarm. When no alarm is intended to be given, the bird simply utters these notes occasionally, as he passes from one tree to another. He is probably accustomed to hearing a response, and if one is not soon heard, he will reiterate his call until it is answered; for as these birds do not forage the woods in flocks, this continual conversation or hailing is carried on between them to satisfy their desire for one another's company.

These call-notes, with which every one is familiar, are very lively in their expression, with a mixture of querulousness in their tone that renders them the more pleasing. The Chickadee, at other times, utters two very plaintive notes, which, unlike those of the generality of birds, are separated by a regular musical interval, making a *fourth* on the descending scale. They slightly resemble those of the Pewee, except that the latter are on the ascending scale, and they are often supposed to come from some other bird, so entirely different are they from the common note of the Chickadee. I have never been able to ascertain the circumstances under which the bird repeats this plaintive strain; but I know that it is uttered both in summer and winter. In the early part of summer, these birds are addicted to a very low, but pleasant kind of warbling, greatly varied but indistinctly enunciated, and which wants only a sufficient loudness and distinctness to entitle the bird to high merit as a songster. This warbling does not seem to be intended to cheer his partner, but rather as a sort of soliloquizing for his own amusement. If such notes were uttered by the young of a singing bird, we might suppose it to be taking lessons in music, and that these were some of its first attempts. I have often heard a similar kind of warbling from the Baltimore Oriole.

The Chickadee is one of the most lively of our birds, and on account of his permanent residence with us, one that would be sadly missed if his race were to become extinct. Though not a song-bird, he is a lively chatterer and an agreeable companion; and as he never tarries long in one place, he never tires one either by his presence or his garrulity.—We associate him with all our pleasant winter walks, in the orchard or in the woods, in the garden, or our immediate enclosures. We have seen him on still winter days, flitting from tree to tree in the garden and orchard with the most lively motions and engaging attitudes, examining every twig and branch, winding over and under and in and out, and then with a few rapid notes, hopping to another tree to go through the same pleasant evolutions. Nothing can exceed either his cheerfulness or his industry, of which he might most truly be made emblematical. Even those who are confined to the house are not excluded from a sight of these little birds. In the country one cannot open a window on a pleasant winter's morn, without a greeting by them from the nearest tree in the garden.

The frequent companions of the Chickadee are the common Creeper and the downy or speckled Woodpecker; but the Woodpecker is a more restless bird, and seldom gives the branches of the trees so thorough an examination as the Chickadee. The former searches for certain grubs that are concealed in the wood of the tree; he examines those places only in which they are likely to be found, listens for their scratchings, bores the wood to obtain them, and then flies off. But the Chickadee looks for insects on or near the surface, is never weary or satisfied of his examinations, and does not confine his search to the branches of trees. He examines the fences, the under part of the eaves and the clapboards of all buildings for crysalids and cocoons, and destroys in the course of his foraging, many an embryo moth and butterfly, which would become the parent of noxious larvæ. Hence there is probably no other American bird that destroys in the course of the year so large a quantity of insects, as he continues his operations in the winter, when there is but a small proportion of any other food to be obtained, and he is obliged by necessity to be very diligent in his work.

The different species above named often get assembled in large numbers upon one tree, and meeting with more company than is agreeable when they are hungry, they will often on these occasions make the wood resound with their noisy disputes. They may perhaps have been gathered together by some accidental note of alarm, and on finding no particular cause for it, the noise that follows reminds one of the extraordinary vociferation with which young men and boys conclude a false alarm of fire in the early part of the night. These birds, though evidently social, are not gregarious, and seem never without vexation to endure the presence of more than one or two companions. Those species most generally associate in flocks whose food is abundant in particular spots, and those which perform regular migrations. But the Chickadees and Woodpeckers can seldom obtain more than one or two morsels from the same tree, and find it, therefore, most convenient to keep themselves separate from their kindred.

NUTRIMENT IN VARIOUS SUBSTANCES.

Animal food, taking bulk for bulk, is assumed as being far more nutritious than vegetable. But when weight is placed in juxtaposition with weight, it is seen to fall far below several farinaceous and leguminous substances. The following tabular exhibit shows what chemical analysis has made apparent on this important topic:—

100 lbs. wheat contain	85 lbs.	nutritious matter.
" rice	90	"
" rye	80	"
" barley	83	"
" beans	89 to 92	"
" peas	93	"
" meat, average	35	"
" potatoes	25	"
" beets	14	"
" carrots	14	"
" greens and turnips	8	"
" bread	80	"

It hence appears that a pound of bread contains more than twice as much nutriment as a pound of meat, and that a pound of peas or beans, more than two and a half times as much as a pound of meat. Seven pounds of potatoes are also, it appears by this analysis, equal in nutritive matter, or the power of sustaining life, to five pounds of animal food.

"Food taken into the stomach, is there digested, and the nutritive portions of it converted into blood, which is conveyed by the proper vessels to every part of the system for its nourishment and support. Any portion of it which, from any cause, escapes the digestive process, and those parts of it which are not adapted to nourish the animal body, are cast off as excrementitious." In eating, repletion should always be avoided. "Most of the chronical diseases, the infirmities of old age, and the short periods of the lives of Englishmen," says Dr. CHEYNE, "are owing to over-tasking the digestion."

"I tell you honestly," said the celebrated ABERNETHY, "what I think is the cause of the complicated maladies of the human race; it is their gormandizing, and stuffing and stimulating their digestive organs to excess, thereby producing nervous disorders and irritation."

SHAKSPEARE, in one of his plays—"As you like it"—has beautifully exemplified the good effects of abstemiousness and abstinence—the only sure safeguards of health against morbidity and disease:—

"Though I look old, yet am I strong and lusty;
For in my youth I never did apply
Hot and rebellious liquors in my blood;
Nor did not with unbashful forehead woo
The means of weakness and debility.
Therefore, my age is a lusty winter—
Frosty, but kindly."

WOOL.—For the last three weeks a very considerable amount of wool has been sold in this place, at fair prices. Mr. Brumbaugh informs us he has bought, this season, about 24,000 lbs. Mr. Cherry Holmes has also bought over 17,000 lbs. The prices paid is from 25 to 43 cents, owing to the quality or condition it is in. Mr. Wm. Lewis, of Berlin township, sold in this place, wool from this year's clip to the amount of $994,59. He got over 40 cents a pound, while one of his neighbors sold wool equally as good as his for 38 cents, after hauling it down to the canal.—*Farmer, (Holmes Co.,) 28th.*

For the New England Farmer.

AGRICULTURE AN EXTENSIVE AND PROGRESSIVE SCIENCE.

BY JOHN GOLDSBURY.

Agriculture has been defined to be the art or science of cultivating the earth,—tillage—husbandry. In its widest acceptation, it embraces all the common and ordinary pursuits of the farmer; nay, all that belong to his pursuits; such, as the clearing the land from trees, bushes, stumps and stones; the examination of different kinds of soil, and their adaptation to different kinds of produce;—the best method of cultivating different kinds of soil;—the mixing, making and compounding of manures;—the sowing and planting of different kinds of grain and seeds;—the cultivation of the crops and the gathering and securing the same for future use;—the building of fences;—the draining of meadows, swamps and marshes;—the selecting and raising the best kinds and breeds of domestic animals; such as cattle, horses, sheep, swine, poultry, &c., and the best means of fattening the same;—the cultivation of the different kinds of garden vegetables, such as beets, carrots, parsnips, onions, turnips, tomatoes, cucumbers, squashes, &c., which belong to a distinct branch of this science, commonly denominated *horticulture*:—the cultivation of the different kinds of choice fruit; such as apples, pears, peaches, plums, quinces, cherries, grapes, currants, &c., all which come under the head of *pomology*, which is regarded as another distinct branch of agriculture.

It will be seen, then, that the science of agriculture embraces a wide range of subjects, sufficient to call forth the energies, and to task the utmost faculties and powers of every farmer, be his faculties ever so various and ever so abundant. It will be impossible for any one to arrive at perfection in knowledge on all these various subjects. After his utmost endeavors and his most successful efforts, he will still be ignorant of many things, which it would be for his advantage to know. There will be some new experiments to be made,—something still to be learned. But, this should not operate to discourage any one from making further experiments and discoveries, but it should stimulate him to greater exertions. For, the more any one knows, the more skilful and successful he will become in his calling. Knowledge is essential to success in all kinds of business. More especially is this the case in scientific agriculture, which embraces such a wide range of subjects, on which so many experiments are to be made.

At no former period of the world, has the science of agriculture assumed such importance, and engaged the hands and hearts of so many virtuous and intelligent farmers, as at the present time. Its value, utility and importance, are too obvious to need illustration. No subject is better calculated to awaken and cherish that spirit of curiosity and inquiry which is so essential to improvement; and

none affords a better prospect of leading to useful and important results. Within the last few years, numerous papers and periodicals have sprung up, devoted wholly or in part to this subject, which have given new importance to the science of agriculture, or rather, have presented its claims to public attention in a new and interesting light. These works have each their respective peculiarities and excellences; and are generally well calculated to aid farmers in acquiring a competent knowledge of this science. Not every thing, however, stated in these periodicals, is to be taken for granted, as true. On the contrary, every statement should be examined, closely scrutinized, and brought to the test of experiment.

Agriculture is, in its very nature, a constantly progressive science. It is founded upon experiments; and these experiments must be repeated, in order to arrive at the truth. For instance, because a person has once been successful in raising a large crop, on a certain kind of soil, by a peculiar kind of cultivation, it is not absolutely certain, that he, or another person, can do the same again; because other causes, which he knew nothing of, may have contributed, in that particular instance, in producing the result. In order to come at the truth, therefore it will be necessary to repeat the experiment several times. And, if the experiment, each time it is repeated, be attended with like success, we then have something that is tangible,—something that can be relied upon.

There are two methods of cultivating the earth, which divide the agricultural community into two classes, the *imitators* and the *experimenters*. The *imitators* copy the example of others. They do whatever they see others do, without once stopping to inquire, whether there may not be a better, a shorter, an easier, and a more expeditious way of doing the same thing. They neither take counsel of their reason, nor of their more scientific brethren. No matter how great the labor may be, the disadvantage under which they labor, or the expense of time and money, they still continue to do, as they always have done, and as they probably always will do, as long as they live. They imitate others in everything except in the improvements of the day. And some of these they acquire unconsiously without knowing it, or intending it.

The *experimenters* pursue a different course. They "prove all things, and hold fast that which is good." They seize with avidity upon every hint, and upon every new idea, and endeavor to improve upon them. Every new experiment is, to them, a lesson of instruction. They inquire of themselves, why is it thus and so? What is the cause of this? What would be the effect, if the experiment were varied a little? Cannot the same effect be produced by simpler means? In this way, they go on, from one inquiry to another, and from one improvement to another, till they arrive at important results. One inquiry paves the way to many more, and introduces them into a wider field of observation, in which they give the most unbounded scope to all their powers.

LUCK WITH TREES.—We have noticed that certain men always have much finer peaches, and pears, and plums, than most of their neighbors, and are called *lucky*. Their luck consisted, in the first place, in doing every thing well—taking what their neighbors call foolish pains—leaving nothing unfinished; and in the second place, in taking good care of what they had; that is, giving their trees wide, deep, and mellow cultivation, applying manure when necessary, and specially the liquid manure from the chamber and the wash-tub. Great pains, taken whether with fruit trees or with children, scarcely ever fail to produce good results.

U. S. AGRICULTURAL SOCIETY.

The Fourth Annual Meeting of the UNITED STATES AGRICULTURAL SOCIETY will be held at WASHINGTON, D. C., on WEDNESDAY, January 9th, 1856.

Business of importance will come before the meeting. Reports from its officers will be submitted, and a new election be made, in which it is desirable that every State and Territory should be represented.

Lectures and interesting discussions are expected on subjects pertaining to the objects of the Association, by distinguished scientific and practical Agriculturists. The transactions of 1855, containing a full account of the late Exhibition at Boston, will be distributed to such members as are present.

The various Agricultural Societies of the country are respectfully requested to send delegates to this meeting; and all gentlemen who are interested in the welfare of American Agriculture, who would promote a more cordial spirit of intercourse between the different sections of our land, and who would elevate this most important pursuit to a position of greater usefulness and honor, are also invited to be present on this occasion.

MARSHALL P. WILDER, *President.*
W. S. KING, *Secretary.*
December, 1855.

☞ Gentlemen who are desirous to visit Washington will find the time fixed for this annual meeting, as well as the occasion itself, one of great interest. The Christmas and New Year holidays will be over, the House probably organized, the machinery of the government in active motion, and strangers from every portion of our widely extended country, and from nearly every portion of the civilized world, will be there looking on. All this may be seen during the same visit which shall enable them to do something for the cause of Agriculture, in attending the sessions of the United States Society.

ART OF MILKING.

The art of milking well is not taught in a hurry. It requires long practice to milk properly, and therefore all the young people on a farm ought to be shown how the labor should be done. It is quite important that this branch of the dairy should be particularly attended to, for a good milker obtains at least a quart more from the same cow than a poor milker.

The first lesson to be taught to young people is gentleness and kindness to the cows. They never need be treated harshly, in case the business is properly commenced. Cows that have been caressed and uniformly well treated are fond of having the milk drawn from the udder at the regular

time of milking, for it gives them relief from the distention of the milk ducts.

Let young people be put to milking the farrow cows first, or such as are to be soon dried, and then the loss from bad milking will be less injurious; the hand should extend to the extremity of the teats, for the milk is then drawn easier. They should be taught to milk as fast as possible. More milk is always obtained by a rapid milker than by a slow one. They should therefore be taught to think of nothing else while milking, and no conversation must be permitted in the milk-yard. They should sit up close to the cow and rest the left arm gently against her shank. Then if she raises her foot on account of pain occasioned by soreness of the teats, the nearer the milker sits to her, and the harder he presses his left arm against her leg, the less risk will he run of being injured.

Cows may be taught to give down their milk at once—and they may be taught to hold it a long while, and to be stripped indefinitely. The best way is to milk quick and not use the cow to a long stripping or an after stripping.—*Northern Farmer.*

For the New England Farmer.

ON SHOEING HORSES THAT OVER-REACH.

MR. EDITOR:—I was bred from my youth a blacksmith and farmer, and whether a natural mechanic or not, I was always anxious to know the whys and wherefores of things, or more properly speaking, the casualties and preventives. I was also fond of trying experiments upon such things as appeared favorable of improvements. I was generally in the shop with my father evenings, rainy days, and such other times as I could be spared from the farm and school. By being in the shop so much, I obtained the views of the farmers generally, and by that was enabled to make many improvements on the farm. I learned also, that many farmers entertain very erroneous views about blacksmithing, (and I might add blacksmiths too;) still they were bound to dictate according to their prejudices; as, for instance, one says: "This horse over-reaches, I want you to put the forward shoes as far forward as possible, and set the hind shoes as far back, or he will tear them off." I would sometimes try to reason the case by saying the way to prevent a horse from over-reaching, is to augment the speed of the forward feet, and retard the motion of the hind ones; but in order to accomplish that, I shall have to reverse your directions. Some who had little or no mechanical genius, would cut short all argument, and say, "follow my directions or else not shoe the horse." Of course, a mechanic must obey orders, if he breaks owners; so the horse would go out of the shop, nicely fettered, with his shoes clinking at every step; while, perhaps, the man of inquiry would desire a full explanation. My way is, to make the toe-corks very low, and standing a little under, and the shoes set as far back as convenient on the forward feet, with high heel corks, so as to let them roll over as soon as possible. On the hind feet, I have the heel-cork low, and the toe-cork high, and projecting forward, thus keeping back the hind foot, while coming up over a high toe-cork, giving time for the forward foot to get out of the way. If thus shod, the horse will travel clean, without a clink, and his speed will be increased on a trot, fifteen or twenty seconds in a mile. If acceptable, I may say something about shoeing foundered horses hereafter. DUX.

REMARKS.—We shall be glad to hear from our correspondent on the subject which he suggests above.

CONCORD FARMERS' CLUB.

At a recent meeting of this Club, committees were appointed to report upon the following subjects. There are three persons on each committee. We give only the names of the chairman of each.

1. *On Manures*—Elijah Wood, Jr.
2. *Hoed Crops*—A. H. Wheeler.
3. *Root Crops*—Willard T. Farrar.
4. *Live Stock*—Charles Hubbard.
5. *Grass Crop*—Simon Brown.
6. *Grain Crop*—Edwin Wheeler.
7. *Farm Buildings and Farms*—J. D. Brown.
8. *Ornamental Gardening*—E. W. Bull.
9. *Farming Tools*—Francis A. Wheeler.
10. *Fruit and Ornamental Trees*—J. B. Moore.
11. *Poultry*—James B. Brown.
12. *Working Oxen*—Jacob B. Farrar.
13. *Draining*—Joseph Reynolds.
14. *Milk*—James P. Brown.
15. *Feeding Stock*—Daniel Tarbell.
16. *Special Manures*—Jonathan Wheeler.
17. *Vegetables*—William D. Brown.
18. *Pruning*—C. W. Goodnow.
19. *Garden Seeds*—Minot Pratt.
20. *Farm Help*—Gardner Wheeler.
21. *Horses*—Charles B. Clark.

For the New England Farmer

FINE YIELD OF CARROTS.

MR. EDITOR:—On Saturday last, I saw a piece of land in this town, on which grew carrots the present season, under the care of John Peasley, the proprietor, one of our most industrious and successful cultivators. He told me, that the carrots had all been weighed at the town scales, as they were harvested and delivered, divested of their tops—which were left on the ground. To-day I learned from Mr. F. Walker, who has the care of the town scales that he had weighed carrots for Mr. Peasley, the present season, as follows, all of which grew on less than half an acre.

October 23	1 load	2,070 lbs.
November 5	5	10,040
November 6	4	8,010
November 8	4	8,230
November 8	4	8,010
November 10	1	1,639
	19 loads	37,999 lbs.

Better crops may have been grown by others—but I have not seen them. J. W. P.

Nov. 13, 1855.

A FINE ESSEX HOG.—Our neighbor, CHARLES B. CLARK, Esq., recently slaughtered a hog of this breed, which weighed when dressed *four hundred and seventy-two pounds!* He has plenty of infantiles of the same race, which promise just as much obesity as this, when they arrive at mature hog-hood.

ABOUT MANURE SHEDS.

When we *see* a reasonable scheme in successful operation we feel more of its force—it stirs us more—than anything we may only hear of it. So thought a certain farmer—or at least so acted he—when he went to work the other day to build *a manure shed.* He had often heard it remarked that manure kept under shelter was worth double that left exposed in the yard—he had often noticed the difference in its smell, texture and appearance on his own premises, but he had never tried the two, side by side, on a fair experiment, until the present year. Now he *saw* the difference in value, he believed what he had been told, and he went to work to build a manure shed, so as to reap more of the benefits now so evident.

It is not to be supposed that the story of his experiments will convince all who read it; he had read just as good, long before he really began to "show his faith"—in the only true way of showing it—"by his work." But it is "good enough to tell," for all that, and we hope, will not be without its influence. He has two good-sized open sheds attached to his barn-yard, which his cows occupy for shelter at will in stormy weather. He keeps his oxen and horses in close stables, and these, as well as the sheds, are kept well littered through the winter. The manure from the stables is thrown into the yard; that made under the sheds remains there; both have a sufficient mixture of straw to prevent too active fermentation. And both, were they in the same situation in regard to shelter, would be of equal value.

Last spring, incited thereto by a remark in the *Rural*, he determined to test the difference as closely as he could, without going into any minute figuring or preparations, for that is too small business in his eyes, for one with so much work to attend to. So on his corn and barley ground, he took pains to draw the manure from the yard and from the sheds in equal quantities—though he said he did not think it was hardly fair, for in the yard manure he had to cart off a large quantity of water, making—if there were no other difference—a sheltered load worth one-third more than an unsheltered one. (This was the first idea that really *hit* him on the subject. He saw that he could save the cost of a simple shed, just in the expense of *cartage.*) Both kinds were treated in the same manner, the crops were sowed and cultivated the same; but he did not wait till harvest to decide that he would shelter his manure, hereafter.

Where the sheltered manure was applied, the corn and barley came up first; and they kept ahead all the season. The cut-worm worked less in the corn, and the barley seemed to escape all injury from insects, though that part to which the yard manure was applied suffered from the Hessian fly to a small extent. The difference in the two was very plainly marked, and at harvest, it was estimated that the shed manured land gave a crop one-third greatest.

Now our friend has erected two manure sheds. One covers the dung-heap from his horse stable, the other is intended to contain that from his cattle stalls, and the major part of the yard droppings, gathered from day to day. Some time, we doubt not, he will go into manure cellars, and stables for all his stock; but this move is a creditable one, and in the right direction. He will also learn the benefit of muck as a material for cheaply increasing his stock of manure, and then we shall see a shed for *that*, to be used as an absorbent of the liquid—now, something *stronger* than rain-water, and worth saving and cartage.

His sheds are simple and cheap affairs.—Crotched posts are set for the front, the back is the barn-yard fence—one shed is covered with boards—the other with poles and straw. We expect to hear more of their success or failure hereafter. That other improvements will follow, is very sure; for a good example, especially if a man sets it himself, is certain to influence those who see it.—*Rural New-Yorker.*

HOWE'S ADJUSTIBLE CATTLE LEADER,

AND CHECK FOR FENCE BREAKERS.

It has often seemed to us a somewhat cruel matter to punch out the cartilage of a bull's nose, and thrust in an iron ring, and keep it there as a perpetual annoyance to the poor animal. Still, something must be done to afford a safe control of them. The device of Mr. J. A. Howe, of this city, as represented above, seems to be just the thing. The thumb and finger being pressed immediately over the ends of this spring, open the balls on the other end; it is then slipped on to the cartilage of the nose, and the spring in the centre gently closes it. The cartilage being thinner on the inside of the nose than it is near the end, prevents the balls from slipping off,—so that the harder the strain is on the cord, the tighter becomes the balls. The implement can be applied, or removed, in a moment.

It is also intended for unruly cattle by a simple process which is not illustrated in the above engraving.

A patent has been applied for, and the implement will soon be for sale.

A Stratum of Salt under Niagara Falls.—E. Merriam, of Brooklyn, who has examined the rocks underlying the limestone bed of the Niagara river, states that he found a saline stratum under them. This stratum is the foundation of the great limestone walls which form the great cataract of Niagara, a frail structure it is, and it is in this stratum that the Niagara has the whole of its bed below the Falls, and being soft, the water which falls over the Horse Shoe and over the American, north

of Goat Island, has had no difficulty in sinking chasms of vast depth, into which the broken rock of the limestone walls which compose the cataract falls. This stratum extends over a large tract of country, watered by the great lakes, which seem to have a subterranean communication with the volcanoes of Hecla, in Iceland, and those of the southern part of the European continent, as the disturbance caused by the earthquake at Lisbon, in 1775, caused the agitation of the waters of Lake Ontario. He says that an immense volume of gas arises from the chasm into which Niagara plunges from the lofty precipices which form the Horse Shoe on the American fall, and might with proper apparatus be ignited—and when on fire would exceed in beauty the flames of the gas ascending from the deep ravines of the salines of Kanhawha, which give a column of flame of seventy feet in height. His conclusion, from all his observation, is, that the great falls do not date beyond the universal deluge.

SPIRIT OF THE AGRICULTURAL PRESS.

PERUVIAN GUANO.

Prof. NASH, in his *Farmer*, says:—"This is an excellent fertilizer. Every farmer should have more or less of it at command for special applications. On poor, out-of-the-way soils, where heavy manures cannot be carried without too much expense, it may be used with decided advantage for almost any crop. On lands of a good quality well situated for working and manuring, *guano will not, in the long run, pay at present rates, if used for the ordinary purposes of inland farming.* When there is beforehand almost a certainty of high prices for produce, the inland farmer may do very well to try it."

We have recently conversed with two gentlemen—both practical men, and of critical observation—who informed us that they now have fields in grass, and yielding good crops, laid down some five, six and seven years ago, manured then solely with guano, and receiving little or no manuring since. If such were to be the general result, we might bring up our farms to a wonderful degree of fertility; because a third or half of the tillage land laid to grass with guano, and producing a fair crop for several years in succession, would enable us to appropriate all the manure of the farm to the hoed crops. This would allow of very high manuring, and put the land in such condition as to produce heavy grass crops without the further application of guano. But we need further experiments, and test the guano upon its own merits, by putting the land into grass without a particle of any other manure.

THE AMERICAN SCYTHE.

A writer in one of the English papers inquires if any of their agricultural readers are acquainted with the American scythe, its construction and superiority over those of ordinary use in the British isles? It appears that a native of Yorkshire, England, on a visit to his native land, brought the subject of our scythe into comparison with those in use in that country. He told his friends there, that if it were possible to introduce largely the true American scythe, though at great money outlay, the gain to Britain would be very remunerative, and *that* by its superior efficiency. He also told his wondering friends that one man here could cut four acres of barley or oats in a day! The writer states that the real shape of the scythe could not be ascertained. Is it possible that the American scythe has not yet been seen and used in many parts of England? We recommend to our friends, Ruggles, Nourse, Mason & Co., to send Mr. MECHI a case of half a dozen by the next steamer.

HARVESTS IN EUROPE.

A French paper, the *Constitutionnel*, says there is a large deficit in the crops of that country, and that they will be under the necessity of purchasing largely of other countries. They have usually gone to Russia and the countries on the Black Sea, but this year, they say, "we shall address ourselves to the United States, where the harvest has been very abundant, and it is evident that we may pay in produce or drafts for a considerable part of the corn [wheat] which we purchase."

The crops of wheat and rye throughout the whole of Northern Europe are lamentably deficient. The *Mark Lane Express* (London) says:—"America as well as ourselves, began this cereal year with an exhausted stock; whilst on the other hand, the population of the States increases even faster than our own, or any European State; so that consumption keeps pace with production up to the present time, whatever it may do hereafter. They have, however, had this year an excellent crop, and a large increase of land under wheat, and will probably be able to export as much, if not more, than in 1847. The question therefore is, what proportion of this shall we obtain?"

In some parts of Europe, however, the harvest has been good. In Austria, the wheat crop was abundant, and so in Prussia and Egypt.

SCARCITY OF HORSES IN EUROPE.

A correspondent of the New York *Spirit of the Times*, writing from Paris, says:—"In London, ladies' saddle horses and carriage horses are not to be had. In thirteen days' search, I could not find a decent pair for sale at any price. If this war lasts another year, the Europeans will be importing horses from America; and it would be well worth the attention of our farmers and breeders to raise large horses, fit to draw a heavy carriage, or carry a heavy man. Good saddle horses for gentlemen are still to be found by paying for them; a first rate one stands you $300. A Utica (N. Y.) paper states that a gentleman is now in that city purchasing carriage and saddle horses for the market."

HOGS AND CORN.

Good pork has not been so high for several years

as it is now; indeed, pork in New England has been raised at a very small profit if any for six or eight years past. The Cincinnati *Prices Current* says:—"Within the last two weeks there have been numerous contracts made for new corn, amounting in the aggregate to one hundred and fifty thousand bushels, at prices varying from thirty-one to thirty-five, all to be delivered in this city before the first of next January. Holders, under the influence of the excited state of the market for breadstuffs, and anticipating a large foreign demand for corn, are now very firm, and contracts could not be made below thirty-five, and many are asking higher rates.

There is a better feeling on the part of hog buyers, with an increased disposition to operate. Contracts for two lots have been made at $6,75 for November delivery, and holders are now asking $7, and seem pretty stiff at this rate. For December delivery, $6,50 has been paid, and at this rate there are, perhaps, more buyers than sellers."

AGRICULTURAL BENEFITS OF SNOW.

It is with some feelings of regret and discomfort, that farmers, as well as other men, regard the approach of winter. That during several months, there must continue an exhausting drain upon the accumulations of the year, without any replenishing streams to counterbalance its effects, is a fact not pleasant to contemplate, especially if an individual happens to be straitened in supply. Hence, when a storm of snow occurs early in the season, as one did in this locality, on the twenty-fifth ult., the inquiry naturally arises of what benefit is snow? We see its evil effects in the wretched state in which it places our roads; in the strained and broken manner it leaves our trees, especially if it comes, as in this instance, before they have been defoliated by the wind and frost; in the downcast and sorry look it gives to all animated nature, man included.

It is not our purpose to assert the value of an untimely snow, any more than that of an untimely frost. Any one of the phenomena of nature may be attended with evil consequences, however beneficial and necessary in a general way. Too much rain or too little, too backward a season or too forward; and a thousand things generally beneficial, may be specially injurious. Nature works by general laws, and in their impartial administration, does not stop to inquire whether or not this man's seed is sown, or that man's harvest is secure.

Snow, in latitudes, where the temperature is sufficiently low for it to fall, is of vital importance to vegetable life. Its peculiarly porous structure renders it an exceedingly bad conductor of caloric; and hence, when covering anything either warm or cold, and greatly differing in temperature from the snow itself, or from surrounding objects, it requires a long period of time for the equilibrium to be restored.

If the earth becomes early covered with snow, and before the ground is frozen, it will remain above freezing point the entire winter, even though the atmospheric temperature should go down many degrees below zero. So decided is its protection, that if the soil be penetrated with frost to the depth of several inches before the fall of snow comes on, the caloric of the subsoil will remove the frost, notwithstanding the atmosphere has not at any time risen much above freezing point. The ground had been frozen like a stone before the snow fell upon it, the weather continuing many weeks below freezing point; and yet afterwards, on removing the snow, the ground was found thawed out, and easily lifted with a shovel. Of course, a boy's reason was given for this circumstance, viz: that the snow was warm, and had thawed out the ground, instead of the true one, that its non-conducting properties had intercepted the radiation of the heat from the lower strata of the soil, and this, acting upon the upper stratum, had removed the frost.

Alpine plants, that outlive the severest winters of mountain districts because protected by snow, have perished in the comparatively warm climate of England for want of such protection. We had a good illustration of the genial influences of snow in our own country last winter. The thermometer went down to a point unprecedented in our history, being no less than twenty-two degrees below zero. That was a point of depression indicated for the first time in a record of sixty-seven years, and for how long a period previously, it is impossible to tell. Of course, the peach crop was utterly ruined, and orchards, which were wont to yield hundreds of bushels of splendid fruit, produced this year, nothing but leaves. At our horticultural show, however, there were exhibited several magnificent specimens of peaches, which, upon inquiry, were found in every instance to have been produced upon limbs that had, by a fortunate accident, been bent down and covered with a snow-drift. The temperature in their position did not probably fall to zero, and if they could have laid upon the ground, would barely have reached freezing point. The earth at this severe period was mantled with a heavy fall, and we tremble at the possible consequences which might have ensued in case the ground had been exposed and denuded. As it was, the frost did not penetrate to an unusual depth, and the wheat fields and the meadows came out in the spring, fresh and green from their long winter slumbers.

Snow has been called the poor man's manure; but we are not aware that analysis shows it to possess any fructifying elements not contained in rain water. The gradual manner of its melting away enables the soil to absorb a greater portion, and thus become thoroughly saturated at the season when such a result is desirable. The absorption of caloric, which becomes latent in melting snow, prevents a sudden transition from the chill of winter to the warmth of spring. If it were not for this, vegetation would start too early, and all the fruits and tender plants would be nipped by vernal frosts. As the seasons are now constituted, the sun must at least cross the equator, and the length of days exceed that of the nights, before the snow melts from the hill-side, and disappears in the vale. It has then performed its mission, a gentle and a merciful one, whatever may have been its chill and forbidding aspect in the early autumn.

A locality that experiences abundant falls of snow, which cover the ground uniformly through the winter, will admit of the cultivation of many things that cannot be grown in other places with no lower temperature, but destitute of snow; and many countries would be, without its protecting influences, mere regions of waste and desolation.—*Rural New-Yorker.*

For the New England Farmer.

HOW TO KEEP YOUR HOUSE WARM IN THE COUNTRY.

BY HENRY F. FRENCH.

Open Fire-places nearly Obsolete—Old-fashioned Kitchens—Sledding Wood—Franklin Stoves and Fire-frames—Heat and Fresh Air, Necessaries as well as Luxuries—How much air a Man uses—How agreeable to breathe the same Air that has just been used by a dozen others!—Close Stoves—Carbonic Acid by Slow Combustion—Poison from red-hot Iron—Ventilation, Principles of.

Discourse as pleasantly and as learnedly as we may, of the cheerfulness and healthfulness of an old fashioned wood fire on the hearthstone, we can never bring back any more of that agreeable idea than the pleasant memories of one generation which has just lived through it, choose to furnish to posterity.

Wood piles on the hearth, like wigwams and log-houses, are, as the clearings increase, getting to be matters of history. They are very pleasant things to remember, but on the whole would be, to our more cultivated sensibilities, in these times, very uncomfortable to depend on, for house warming, in a New England winter.

I trust I am not ungrateful in what I am saying. Many a pleasant evening have I danced with the boys and girls of the village by the light of the blazing fire on the kitchen hearth. Many a time have I sat on a stool in the chimney corner, and looked up and seen the stars twinkling through the broad flue. Well do I remember the high-backed *settle*, which was as essential then in a kitchen, as a sofa is now to the parlor. There may be readers of the *Farmer* so ignorant as not to know what a settle is! It is a high-backed wooden bench, long enough for four or five, or occasionally, six or eight, boys and girls to sit on, boarded close, from top to bottom on the back, and with arms at the ends, and a board overhead—a piece of furniture doubtless designed, not only for a seat, but for a screen to break the current of cold air, that always whistled past every door and window towards the big fire-place to supply the tremendous draught. I remember well, too, the fun we had, getting in the wood for the evening fires, at one of our neighbors' where the old fashioned fire-place flourished in its purity. The boys had a sled, with a yoke at the end of the tongue, for the two largest to pull by, and a rope hitched forward, for the smaller ones. We piled on the wood, four-foot length, to the top of the stakes, about three feet high, and then at the word, with the doors set open, in we went, into the kitchen, sled and all, and unloaded near the fire-place. A *back-log* of any size not less than a foot and a half in diameter, and a *fore-stick* of half the size, were essential to every respectable fire, and a supply of pine knots for light, finished the preparation for the evening's comfort, in the way of light and heat. They say there is a house in Chester, where the occupants always hauled the wood into the kitchen, sled-length, with a horse, but that was before my day. In our own Homestead, we used to burn four-foot wood in the kitchen, and ours was a modern house, built about the year one, of the present century. Now as to the comfort of this style of fires—everybody knows who ever lived in an old fashioned house, in the country, that in a cold day, everything froze, even in the back part of the room, with the big fire blazing, and the chambers where there were no fires, seemed considerably colder than out-doors. Who, that remembers how his breath was frozen like snow upon the blankets,—(we should have perished in sheets) —at waking, ever desires to go back to the old way of keeping warm?

And then the labor and expense! To be sure the wood was reckoned of little value on the lot. But, at my father's, and at every respectable establishment, it was the winter's work for two men, and a team of four oxen and as many steers, to g up the years stock of fuel. The men and teams were off by daylight, and brought home the wood, sled-leng'h, load after load, and rolled it up into huge piles in the door-yard, and he was considered an uncommonly forehanded farmer, who ever had a stock of seasoned wood on hand. And so they toiled all summer, to raise corn and hay and potatoes enough, to keep the men and teams through the winter, and worked all winter long, getting up wood to keep from freezing!

Wood fires, on the hearth, are out of the question. They cost too much, and that is decisive of the matter. Next in order, came Franklin stoves, and fire-frames, and patent fire places, of all descriptions. The old fashioned people must *see the fire*, and war was, for a long time, waged against close stoves, mainly because they shut the fire from sight. I have always fancied, that the reason why we love to see the fire, is because we are usually cold where open fire-places are used. I never knew a person who thought a blazing fire a very beautiful object in dog-days, and am inclined to think, that a person who is comfortably warm, usually thinks very little of the presence or absence of the fire that warms him; while it is very natural for one who is obliged to stand close by the andirons, and turn round, like a goose suspended by a string to roast, once a minute, to keep from freezing—it is very natural for him to like the looks of a wood fire. Some one has suggested, as an economical substitute for the use of those who want a fire to look at, that they should warm their house with a stove, and have a picture of a good fire painted on the fire-board.

The objections to Franklin stoves and fire-frames were found to be, that they smoked, because in modern buildings, the rooms were too tight to supply the draught, and again they consumed too much wood. They too are gone, like the Indians, an occasional straggler, only, remaining, and we in New

England, in spite of all sorts of warnings, of all sorts of fatal effects, have practically come to the choice between *stoves* and *furnaces*. Leaving all other questions for those who believe that the earth goes backward sometimes, let us discuss for a little space, this question between stoves and furnaces, remembering always, that we are speaking of houses in the country. Your brick blocks in the city, sheltered on every side, warmed from cellar to attic day and night, form a distinct class, of which we say nothing now, except that the principles which govern the subjects of heat and ventilation are not limited in their application to the rural districts.

Two objects are to be kept distinctly in view, heat and fresh air. Perhaps the latter should be put first, for without air, a man will die in about three minutes, while at the lowest temperature known in this latitude, he would live much longer than that, exposed naked, before he would freeze to death.

There is no difficulty in generating heat enongh at a cheap rate. An air-tight stove, in an air-tight room will do that, but the difficulty is, nobody can live in such a place, thus heated. A healthy man must have about a pint of air at a breath, and he breathes about a thousand times in an hour, and so he requires about *fifty-seven hogsheads* of air in twenty-four hours! And this air, once breathed, is unfit for respiration, until chemically changed. The pint of air which passes from the lungs, does not remain in one lump by itself, in some corner of the room, so that a fresh quantity is taken in at the next breath. A single whif of cigar-smoke will pervade the whole room in a few moments, and an old pipe zealously worked by some vagabond, will pollute the atmosphere of a whole street, as you follow behind him. And so, delicate ladies and gentlemen, so fastidious that they would faint at the idea of drinking from the glass which another had used, sit pent up in an unventilated room,and breathe—what? Really, it is too disagreeable a topic to pursue so minutely.

The air is, as we have seen, polluted—in other words, it is deprived of its oxygen, and receives in return *carbonic acid* and vapor, by passing through the lungs in breathing.

This same poisonous carbonic acid is generated also, in large quantities, in the combustion of coal, of all kinds. It is heavier at the same temperature, than common air, and can therefore only ascend, through the stove-pipe, or chimney, by being heated and so expanded as to become lighter than common air.

In the air-tight coal stoves, where the combustion is very slow, and *all the heat is saved*, the carbonic acid is saved also, and instead of going up the chimney, rolls out into the room. It sometimes takes the form of carbonic oxide gas, or, as the miners call it, coal gas, which is, when pure, at once destructive of human life. Such a fire is like a pan of coal ignited in a room without any escape for the smoke or gas—a very common means of committing suicide.

A third method by which the air is rendered impure and unfit for respiration, is by coming in contact with *red hot iron*. Carbonic acid is generated not only from the iron itself, but from the particles of dust floating in the air, which are consumed at once by contact with the iron. Iron contains also, usually, traces of sulphur, phosphorus, and sometimes arsenic, all of which are given off by the iron at a red heat.

These three methods of corrupting the air, namely, by breathing, by slow combustion of coal, including the charcoal made in air-tight wood stoves, and by contact with red-hot iron, are always to be kept in mind. The remedies obviously are *ventilation*, or the introduction of fresh air, the use of stoves open, or with sufficient draught to carry off the unhealthy fumes, and the disuse of all stoves and furnaces that require heating to redness.

I have room only for a few general suggestions as to ventilation. Ventilation implies the introduction of air, and its escape; for it is obvious that air cannot come into a room, unless a like quantity at the same time escapes, for the room is at all times full. All stoves that have a free draught constantly carry air out of the room through their smoke pipes.

If your room were perfectly tight, the fire must go out, or *smoke*, by the air coming down the chimney, in part. You ventilate such rooms by providing an opening for the air to enter the room, and this may be often done by introducing fresh air by a pipe or box through the cellar, and admitting it by a register, under the stove, so that it may be warmed as it enters.

If the heat comes from a furnace, the fresh air being supplied below, and heated, must have space in the room which is to be heated, or it cannot enter. The room is therefore to be ventilated by providing an opening for the escape of the air from it, and this is done best by a register near the top of the room; for, although, as we have seen, the air which has been rendered impure by breathing, is, at the same temperature, heavier than before, yet it is warmed in the same process of breathing and so rendered lighter, and at first ascends, as you may see your breath do, in any clear, cold morning. In the case of close stoves, or air-tights, there is no change of the air,—no tendency of the air to enter or escape. The room soon becomes like a corked up bottle of the water of the Dead Sea, unless artificial means are provided for the admission and escape of air. A register under the stove bringing fresh air in from without, and a register at some distant point at the top of the room, for its escape, are perhaps the best means of ventilation.

But my space, for this number, is already consumed and the question of stoves or furnaces, which I had intended to discuss, must rest for the present, upon the general principles already suggested, perhaps to be further considered in the future.

For the New England Farmer.

MEANS OF IMPROVEMENT.

BY JOHN GOLDSBURY.

The facilities for acquiring and diffusing information are immeasurably greater than they ever have been at any former period of the world. The great improvements in the arts and sciences, the general progress of the age in civilization and refinement, and the spirit of unwonted enterprise pervading all classes in the community, are the surest harbingers of a better day. They have already done much to break down the barriers between different classes of men, and to introduce to each the knowledge and the business of all.

This is as it should be. Man was not made for himself alone, but for society, in which there is a community of interest, and, in some measure, of feeling, which becomes a bond, uniting all together as one common family; so that whatever interests and deeply affects any one class of the community, will, in some measure, interest and affect the whole. We live in an inquiring and observing age. Every improvement, in agriculture or the mechanic arts is now chronicled by the public press, and sent abroad on the wings of the wind, to be read by all classes of men in every part of the world. The facility and rapidity of communication between different and distant places, are among the proudest triumphs of human knowledge, and will do much to correct public opinion, and to direct it to its legitimate objects. There are none so high, and none so low as not to be benefited by the means of intelligence. The thoughts and experiments of one individual are now communicated with electric speed, to quicken the thoughts and experiments of another; and, in this way, all are benefited. Besides, much is to be effected through the agency and instrumentality of our common schools. These little primary institutions, in which the children of the rich and the poor enjoy equal privileges and advantages, and receive the same instruction, are the places in which to sow the seeds of knowledge. And, if these seeds be sown with care, they will spring up and produce an abundant harvest. Here, then, we have a lever power, by means of which we may be enabled to elevate and educate all classes in the community; to qualify them for entering the great field of labor and of usefulness, with skill, dexterity and enterprise.

Our progress, in agricultural knowledge, is onward; it is slow, but sure. We have not yet reached the extreme point of improvement. Before that is reached, many a project will have been proposed and rejected; many an experiment tried and failed. Still the spirit of investigation and experiment is abroad, dangerous only to those who are in error, and who are afraid of improvement. It is highly probable that many of the inventions and improvements of our day would have been regarded by our early pious ancestors as little better than damnable heresy and witchcraft. What would they have said at beholding the effects of *steam*, which is now used in propelling almost all the machinery of the world; when in their day, every thing was done by *manual* labor, and at a very slow rate, and in a very inferior manner. It *then* took as many *days* to do the same work, as it *now* does *hours*, and without doing it half so well. What would they have said at witnessing the more astonishing effects of the *electric telegraph*, by means of which intelligence is now transmitted, with the speed of lightning from one end of the United States to the other; when in their day it would have taken several months, if not years, to have done the same! We see, then, that the spirit of improvement has been abroad in the land, and has wrought out important results; and, that if we do not keep up with the spirit and improvement of the times, we shall soon find the world ahead of us, and that all our ideas and associations belong to a past generation.

It is true, that most of the improvements of our day, great and astonishing as they have been, have been made in the mechanic arts, in the use of machinery, and in the means and facilities of intercommunication. Some improvements have been made in the tools and implements employed in agriculture; but few improvements have been made in the science of agriculture itself. And even these improved tools and implements are not generally used by farmers. Too many still use the old and worn-out implements of a by-gone age. They still continue to plow and harrow, to plant and sow, and to dig and cultivate the ground, in the same manner, with the same implements, and with the same results, as did their fathers, grandfathers and great-grandfathers before them. They never once stop to take counsel of their reason or to consult with their neighbors, upon the best means and methods of doing the same things. The consequence is, they have fallen behind the age in which they live, and are living in the age of high-heeled boots and peaked-toed shoes, when people used to go to mill with a bag thrown across the back of a horse, having the grain in one end of it, and a large stone in the other.

Still, in proportion as knowledge has increased among the people, and industrious habits have been formed, in the same ratio have the means of improvement increased. Every one must have noticed the greater productions of the educated and skilful laborer over the ignorant day laborer who knows just enough to do what he is told to do. Every one must have witnessed the increased skill and power of the scientific laborer, and the greater profits which come from forethought, order, and system, as they preside over all our farms, in all our workshops, and in all the labors of our households;—the care that mends a fence and saves a cornfield; the prudence that cuts the coat according to the cloth, that lays up something for a rainy day, and that saves all its earnings; and the wisdom that leads the farmer to avail himself of all the means of improvement within his reach. Progress—improvement—should be the motto of every farmer.

THE WAY IN WHICH TOADS SHED THEIR SKINS.—I have a small house under my care for growing cucumbers. There is a bed in the middle of it, and the soil is about 3 feet high from the ground (*i. e.*, to the top of the hills where the plants are in.) A person, therefore, standing in the house can examine an object placed on the hill with ease. Last

Saturday, about seven o'clock A. M., I uncovered the house, and went to see that all was right, when to my surprise I saw my pet companion, a fine toad, apparently in the agonies of death. It was seated at the end of the ridge, or hill of soil; its mouth, or rather under jaw opening every few seconds (the top jaw did not move), the eyes shut, and the body violently convulsed each time the jaw opened, and with each convulsion of the body the right fore foot was raised to the head. I placed myself in front of it, and perceived that it was drawing something into its mouth each time the jaw moved; at that instant the right eye opened, it then inflated the body on the left side, and drew in the right, placing at the same time the left fore foot on the head behind the eye and drawing it down to the mouth; it then appeared to hold its fore foot in the mouth for about a second, when it drew it out, and I distinctly saw the three points of the skin that came off its toes, outside its lips till the next opening of the jaw, when they were drawn into the mouth. When it drew its foot over its left eye (which before was shut), it broke out as bright as ever. Some folds of the skin adhered to the left eg, but by two or three motions of the jaw they were gone, and in about a minute the skin was drawn off the lips—the toad had eaten its own skin, and there it stood with its new covering as bright as if it had been fresh varnished. I endeavored to touch it, to feel if it was clammy, but the creature gave a vigorous jump, and the soil adhered to its legs. I looked at it an hour afterwards; it had then begun to resume its dingy brown color. The time it took to get off its headdress was only a few minutes. It appeared to me that each time its jaw opened it drew the skin forward, while it distended the body on the side to be uncovered.—*W. Turner.*

For the New England Farmer.

A SINGULAR TREE.

Mr. Editor:—Several times within two years I have been asked whether I had ever seen or heard of a certain curious or singular evergreen tree in the town of Methuen, in Essex County, Mass., and being engaged in raising forest or ornamental trees, I this day took the trouble to go a short distance out of my way to see it, and propose to give you a short, but not botanical, description of it, viz.;—

I should describe it as a white pine tree, 35 feet in height, 18 inches diameter, 3 feet from the ground, straight and smooth like an old growth swamp pine up to about 14 feet high; it then branches out very thick, forming a head 25 feet in diameter, of very regular cone shape, so thick as to be entirely impenetrable for the entrance of birds on the wing. The limbs are so thick that it would be almost impossible for a man to climb through it. Ten seed-cones that I found under it measured less than three inches in length, (the common pine averaging over six,) the leaves being very much thicker than the common pine, and the joints on whorls of limbs. The tree stands in open, cultivated ground, and is perfectly thrifty. Several young trees that have been transplanted and cultivated by Mr. Jeremiah Barker, are 2½ feet high, and the diameter or spread of limbs from 2 ft. 9 in. to 4 ft., in all cases showing a greater diameter than height. From its general appearance, seed-cones, &c., I suppose it may be a new variety of the white pine not described by Mr. Emerson in his "Trees of Massachusetts." At any rate, it will well pay any lover of trees the expense of a few miles ride, to see it. It stands on a farm formerly known as the "Perley Morse" farm, 3½ or 4 miles south-westerly from Lawrence, and a mile or two more than that distance from Lowell, in a north-easterly direction, or less than a mile from the Bartlett farm. It is one of the greatest natural curiosities that I ever saw in the shape or form of a tree. B. F. Cutter.

Pelham, Oct., 1855.

For the New England Farmer.

MILK.

The component parts of milk are the same in all animals. The only difference in the milk of different animals, is in the different proportions of its component elements. These elements are caseine or cheese, butter, sugar, saline matter and water. Sometimes, however, substances are found in milk, derived from the food, which render it medicinal and even poisonous. The following table exhibits the composition of the milk of different animals, according to Professors Henry and Chevalier:

	Woman.	*Cow.*	*Ass.*	*Goat.*
Caseine	1.52	4.58	1.82	4.08
Butter	3.55	3.13	0.11	3.32
Sugar	6.50	4.77	6.06	5.28
Saline matter	0.45	0.60	0.34	0.58
Water	87.98	87.02	91.65	86.80
	100.00	100.00	100.00	100.00

The proportion of butter and cheese in the milk of the cow is well known to depend upon her food, and the distance of time from the birth of the calf. The milk, several months after this period, contains much more butter, than soon after the calf is dropped. Milk, when viewed by the naked eye, appears to be a homogeneous white fluid; but when viewed through a microscope, it exhibits an infinite number of minute globules. These consist of an oily substance, and when collected together, they constitute butter. When milk is set at rest, in a cool place, these oily particles being lighter than the other parts, gradually rise to the surface, and form cream. When milk is exposed to the atmosphere the sugar it contains is converted into an acid called lactic acid. The warmer the atmosphere to which it is exposed, the more rapidly does this change occur. This acid causes the caseine to coagulate, and thus forms curds and prevents the separation of the cream. Hence when milk is set to allow the cream to rise, it should be kept as cool as possible, in order to retard the formation of this acid, and thus allow all the particles of butter to rise to the surface. As this acid is usually formed before all the butter has separated, the curd retains a portion of it, sometimes nearly or quite half of the butter is retained in the curd. The longer we can keep milk sweet, the more cream rises. The milk of different cows differs in this respect. From some, the cream separates more rapidly than from that of others. Perhaps this is owing to the different proportions of caseine they contain. From forty-eight to seventy-two hours are required to separate the cream. When this separation is completed, the milk loses its white color, and assumes the bluish hue, by which skimmed milk is readily distinguished from milk containing the cream.

When cream is taken from milk, a portion of milk still adheres to the cream. The lactic acid contained in this adhering portion causes the cream

to sour. Various methods have been resorted to, to prevent the souring of milk, the chief of which are the addition of some alkali dissolved in water, and added to the milk when first set in the dairy. Carbonate of soda, carbonate of magnesia and liquid ammonia have been used for this purpose. But neither will answer the purpose effectually, unless added in pretty large quantity. When they are added in sufficient quantity to prevent the souring, a portion of the alkali will combine with the particles of butter, and form a species of soap, which rising with the cream, injures the quality of the butter. The only effectual method appears to be, to keep the milk as cool as possible without freezing, and to churn the cream soon after it is taken from the milk. R.

Concord, Nov. 20.

WINTER MANAGEMENT OF SHEEP.

In the Patent Office Report for 1854, there is a valuable article on the "History and Management of the Merino Sheep," by GEO. CAMPBELL, Esq., of West Westminster, Vt., from which we extract the following remarks on the winter management of sheep, which will be read with interest:

Much of the success of the wool-grower depends upon the winter management of his flock. Sheep are animals which pay their owners better for good care and keeping than any other stock usually kept on a farm; but if fed with a stingy hand, or neglected, if suitable conveniences are wanting, they pay perhaps as poorly as any. The annual loss to the United States, resulting from a want of suitable sheds and other conveniences for the winter accommodation of sheep, is immense. The promptings of self-interest would seem sufficient to induce our farmers to adopt a better system of winter management. No intelligent farmer at this day will attempt to deny the principle that warm enclosures are equivalent, to a certain extent, for food; a variety of well-conducted experiments have conclusively demonstrated the fact. A large proportion of food consumed in winter is required for keeping up the animal heat, and consequently, in proportion as the apartments are warm, within certain limits, the less amount of food will be required. The other extreme, too close apartments, would be objectionable from the impurity of the air, and should be avoided. Sheep have very little reason to fear injury from this cause. The majority of those in our State suffer for the want of shelter and a suitable quantity and variety in their winter food. Many flocks are brought to their winter quarters in fair condition, but are fed so sparingly that the growth of their wool is almost wholly arrested during the winter season, the fodder given them being only sufficient to sustain the vital functions. Under such circumstances the food consumed by them is in fact nearly lost. The owner has received no return in the increase of wool nor in bodily weight; and he will suffer further from a large per cent. of actual deaths before the time of shearing.

With such a course of management the profits of wool-growing will necessarily be small. If neither self-interest nor the feelings of humanity will induce the farmer to provide properly for his dependent flock, he will find it for his advantage to keep some other domestic animal, and I know of nothing more suitable for such men than a hardy goat. While I protest against the starving system, it would seem hardly necessary to caution farmers against the opposite extreme, too high feeding, which is also detrimental to the health and long life of the animal. While preparing sheep for the butcher, high feeding is necessary and proper, but for store sheep and breeding ewes, an over amount of fat, produced by high keeping, is decidedly injurious; and, aside from the attending expense to produce this state of things, it has a tendency to shorten the lives of the sheep and enfeeble the offspring. The forcing system of feeding brings animals to maturity early, but is productive of premature death.

The proper and the most profitable mode of feeding, for breeding and store sheep, is that which will develop in them the highest degree of bodily vigor. Sheep fed in this manner would endure the fatigue of a long journey, while those high fed would fail from excess of fat, and the scantily fed, from muscular debility. Every wool-grower will find it for his interest to provide warm, capacious, and well ventilated sheds for his flocks, with a convenient access to pure water. The feeding racks should be made with good tight bottoms, in order that the chaff and seed, the most valuable part of the hay, may not be lost. Such racks will also answer for feeding out roots and grain, and will avoid the necessity of having an extra lot of troughs for that purpose.

The different ages and classes of sheep should be properly assorted. This classification, however, must be left to the judgment of the breeder. The size of his flock, and his conveniences for keeping will determine the extent of the classification. It will be necessary, in all flocks of considerable size, to place the strong and feeble, in separate flocks. The breeding ewes should constitute another division, and so on with the lambs, keeping each class, and age by themselves.

In regard to the question, how often should sheep be fed? a difference of opinion among good managers exists. While one believes that twice a day is sufficient, another thinks it desirable to feed three or four times; but the most important point, I apprehend, is to feed regularly, whether twice, three or four times a day. The writer feeds, at present, hay twice, one day; the next, hay in the morning and straw at night, and so on, giving hay and straw alternately, instead of hay; and beside, a feed of roots and grain is allowed at mid-day, allowing a half bushel of corn and cob, or oatmeal, mixed with two bushels of roots, to the one hundred head. As sheep are fond of a variety of food, it is desirable to make as many changes as practicable. If allowed constant access to pine or hemlock boughs through the winter, it will be conducive to their health. Salt is equally as essential in winter as in summer, and should be kept constantly by them. Rock-salt, which is imported in large lumps, weighing from 20 to 50 pounds each, is the cheapest and best. Sheep are not liable to eat it in sufficient quantities as to ever injure them, as they can only get it by licking.

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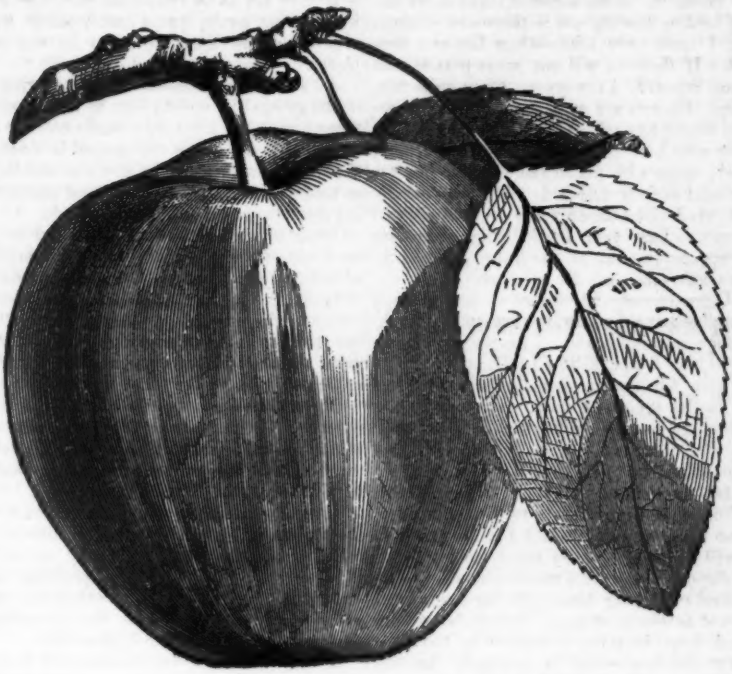

THE WILLIAMS APPLE.

This apple is called *Williams Favorite*, and *Williams Early Red*. It originated in Roxbury, near Boston, and was introduced by A. D. Williams, Esq.,—hence its name. COLE describes it as "large, oblong-ovate; bright red; dark red in the sun; little pale yellow in the shade; stalk slender, two-thirds of an inch long, in a narrow basin; flesh yellowish white, fine, mild, pleasant and excellent. Ripe during August. Moderate grower, good bearer. Requires a strong moist soil, and high culture to bring the fruit to perfection, and then it is splendid, and the most salable apple of its time in the Boston market.

The apple from which the above sketch was taken, grew in the garden of WM. W. WHEILDON, Esq., of Concord, who not only obligingly furnished the fruit, but the following description:—

The above description by Cole, of this favorite summer apple, (admitted to be the best we yet have among the early kinds,) will hardly enable any one not familiar with the fruit to recognize it. The form varies considerably, but the true type resembles the Porter in shape; and others of them can hardly be distinguished in color or feature from the Sopsavine, which is ripe about the same time,—say the middle of August. The stalk or stem is nearly an inch long, but sometimes very short and fleshy at the base—this latter is an invariable feature, and together with the fleshy *nob*, where the stem is set in, always distinguish it from the Sopsavine. It is of a rich *winey* flavor, and generally with fine veins of red running through the white and delicate flesh.

For the New England Farmer.

CARROTS FOR HORSES.

MR. EDITOR:—For two winters past I have fed my two horses upon carrots and hay; commencing with November, and ending about the first of April. During this length of time, I gave very little other grain, for carrots I consider grain, and fully equal to oats. My horses are in constant service on the road; and under this treatment, they usually come out at the end of the "pile" looking better than when they commenced. My dose, is two quarts, morning, noon, and at night four to each horse; they have as much good, sweet English hay as they will eat, and cut, whether fed to them dry or otherwise. This latter, I have always practiced, ever since I have had the management of horses; and I am satisfied, that it is the cheapest and best way, in which it can be given to the horse. There is no

waste, and horses eat it better, and have more time to rest, which is quite an important consideration, where the horse is liable to be taken from the stable at any moment. I am satisfied there is no better way of feeding horses, nor is there any cheaper one—that I have ever tried—than the one here mentioned. If there is, will not some person who *knows* please report? I always cut them quite fine, before using. Carrots are most excellent for horses whose wind is any way affected—such as the heaves, &c. Those who have tried them for this purpose, will, I think, agree with me in this; if not, just try the experiment and be satisfied. They are usually cheap, compared with other articles of feed of equal nutritiousness. Last year I paid nine dollars per ton, this year eleven, and at the latter price I prefer them to oats—measure for measure.

Patent Office report: "A bushel of carrots, well cut up by a proper root-cutter, is as good as a bushel of oats for a working horse. I have tried the experiment (so have I, Mr. Editor,) fully, and satisfactorily. I have fed twelve quarts of sliced carrots instead of twelve quarts of oats, to a horse, the whole winter, and found no difference in the results. I gave hay with the carrots as we do with the oats."

It is calculated that 276 pounds of carrots, are equal to 100 pounds of good hay, and that 52 pounds of meal or corn is equal to 100 pounds of hay. From these estimates—and I will venture to say, they will be found pretty nearly correct—any person, so disposed, can easily satisfy himself, whether my method of feeding horses during the winter months is not as cheap as any. Where horses are worked and kept in good condition at the same time, if not the best—that is generally the *best* which does its work *the best* and cheapest.

East Weymouth, Nov., 1855. N. Q. T.

CULTIVATION AND PRESERVATION OF FORESTS.

BY B. F. CUTTER, ESQ.

The first thing to be taken into consideration in the cultivation of forests is the means by which they are propagated, whether from seed or by transplanting young trees. I propose first to notice the propagation from the seed.

The seeds of all the oaks, hickories, butternut, black walnut, beech, chestnut, bass, hornbeam and nettle tree, are ripe, and may be gathered at the first hard frosts of October, and all require the same treatment, viz: they may be planted directly after ripening, or may be kept in some moist place until spring and then planted. It injures all of the above kinds to dry them.

The scarlet and silver maples, canoe and river birches, and elms, ripen their seeds early in June, and should be planted immediately without drying. In good land they will grow from three inches to three feet the first year. They may also be dried and kept.

The sugar maple, white pine, hemlock, spruce, arbor vitæ, white cedar, larch, black and yellow birches, ripen their seeds in August and September, and may either be sown directly or dried and kept till spring before planting.

The pitch pine and white birch ripen from November to March, and of course should be planted in the spring.

When seeds are not liable to be destroyed by birds, mice or squirrels, it is best to plant them in the fall, as that is the time designed by nature; and a moist, shady place is much the best, especially if they are to be transplanted. The arbor vitæ, white cedar, larch, spruce and hemlock will seldom vegetate unless they are sown in wet and shady places.

All seed trees need but a thin covering of earth, if the ground is moist; but if the ground is dry, there should be allowance made and the seed covered a little deeper as the ground is drier. One of the best rules than can be given is to follow Nature as near as possible, in the time and manner of planting and also in the selection of lands. All the lighter kinds of seeds, that are scattered by the wind, need but very slight covering, and generally succeed without anything more than the rains will do.

It is a very good plan,—and is the practice in the old countries—to sow several kinds together, as the oak and pine, or the pine and white birch, as they protect each other, and one may come up if the other fails.

The red cedar, mountain ash and the thorn ripen their seeds in the autumn, and require two years to vegetate—they should be gathered and kept in some shady place under ground one year previous to planting.

All the oaks, nut-bearing trees, maples, bass, &c., require warm moist soil, while the evergreens, white birch, &c., will generally succeed on the lightest soil. The white pine probably adapts itself to all kinds of land better than any other tree, growing equally well from the quagmire of our swamps to the top of the highest hills.

If the trees are to be transplanted from the forest, care should be taken to select good, strong, growing young trees from places where they have not been too much shaded—should be taken up carefully and set out as soon afterwards as possible. They may be set at first from 3 to 6 feet apart, and the trees may be of any size from 1 to 12 feet high or more, according to the taste, and care should be taken not to have them set much deeper in the ground than they formerly grew in the woods.

A growth of wood could probably be obtained in this way sooner than by sowing the seed; but the first cost would be much the most. If seedling trees from the seed bed were to be transplanted, I should recommend to transplant them when much smaller; say from 1 to 3 feet high.

The protection of our forests might be all summed up in a very few words, viz.: keep out the cattle, fire and the speculators, and let the birds live, especially the wood-peckers.

Every man knows what would be the consequence if the fire should run through his wood-lot; but it is not every man that is aware of the damage his cattle do to his lot by being allowed to run in it; and any one would hardly be able to make him believe that a herd of cows would destroy more young wood in a few days or weeks than they were all worth, and yet it is frequently the case.

It is probably not of much consequence to say anything at this time about the destruction of our old growth, as it is nearly all gone in this region, but do our best to save the young growth that is left, and let the speculators go for the present.

In regard to birds, it is well known that all kinds, that live in the woods subsist, at times, almost wholly on insects, and it is also very well known by naturalists and others, that all insects are injurious

to trees, hence it should be the duty of every man to do all in his power to save the birds from harm. I have never known but one kind of bird that ever injures a tree, that one is the sap-sucker, a species of woodpecker, which sometimes eats the tender bark; and he, probably, does ten times more good than mischief.

It is thought by very many of our farmers that the forest does best if let alone and not pruned, and as the work has generally been done, this is the best way; but from twenty years' experience in the business, I have come to a different conclusion. I know of no good reason that can be given why a wood-lot may not be as much benefited by pruning as an orchard. Every good cultivator of fruit knows that it injures his orchard very much to let an inexperienced man prune it with an axe, as people generally have done their wood-lots, and the same rule applies as well to the one as to the other.

The method I should recommend to be pursued would be, to thin out all trees that are dead or show signs of decay, and also others where they are so thick as to interfere with each other too much, and to trim off with a pruning-saw all dead and decaying limbs where they interfere. I very much doubt the propriety of cutting off good, thrifty, growing limbs, unless they interfere badly with other trees or limbs of the same tree.

It is frequently said that it does not pay to trim them. It may be so in some instances; but when wood sells from four to nine dollars per cord in our markets, it does not take but a small pile to pay for a day's work. I know of many places near by, where a man may turn out from two to thee dollar's worth per day and still leave the lot in a better condition to grow for ten years more, than if not pruned.

In order to have a growth of trees start in good shape, it is necessary to have them very much thicker at first than they can grow when they become larger, and most farmers argue that they will die out and thin themselves best, if let alone, and refer you to the old growth and talk of the clear lumber they make where the limbs have rotted off; but they do not consider that our climate is very different from what it was when the whole face of the land was covered with wood, and that those old trees that made the clear lumber had been 200 years in growing from 1 to 2 feet in diameter; nor that the dry winds now sweep through and between our scattered wood-lots, and have a tendency to preserve the dead limbs from decay, so that they remain on the tree in a dry state and make what the carpenters call pin-knots, so that the only way by which we can have clear lumber, is to prune the limbs off when the trees are small. It is well known to every observing man that the lumber of our second growth grows much faster, and comes to maturity in much less time, than it took for the original growth, and that there is a vast difference in the value of lumber, some of it being more valuable and some of it less—the ash and white pine, for instance—the former being more valuable and the latter less.

In regard to the length of time that a lot of wood should be left to grow, people differ very much; but where wood is for the fire, and dollars and cents are the only objects in view, from 26 to 30 years is long enough. But, if this process were followed out, the question would be asked—where is our lumber for building and mechanical purposes to come from? and the answer will and must be, let your wood-lots stand longer, and prune and continue to thin out, and you will soon have lumber enough.

In conclusion, it may not be out of place here to give a few instances of the growth of some trees on my own land, to show at what age of the tree we may expect a good sized lumber. I have two white pines, one of which was trimmed about 50 years ago to the height of 25 feet, and a man, who was present at the time, said that it was just the right size to hew for a six inch square stick. The other was pruned 5 years later, and was just about the same size; they stand in thick woods and are 100 feet high, and girt, 4 feet from the ground, 8 feet 3 inches each, and are estimated by good judges to contain more than 1200 feet each of merchantable lumber. Another lot of six trees, where the old growth has, more of it, been cut out, measure 7 feet 7 inches, at four feet from the ground, are not so tall as the others, but grow much faster, as I can remember the time that I could carry off, on my back, the whole of a tree, and my age is 52. Another lot which came from seeds of the first mentioned tree, and cannot be more than 40 years old, are now 60 feet, or more, long, and from 6 to 10 inches square. From the above it will be seen that the trees gain in quantity much faster after they are 40 years of age than they do before.

The study of nature, as seen in the growing forest, is a very profitable and pleasing one to me, and it seems strange that there are not more who pursue and enjoy it.—*Granite Farmer.*

CULTIVATION OF CRANBERRIES.

At the New Hampshire State Fair, Richard Hall of Auburn, exhibited some cultivated cranberries raised in a run not very wet, but bordering upon the high land. His process of cultivation he stated to be this: to remove the surface of the ground some three inches in depth, which in this case was carted to the pig-sty; he then took sand from the shore of a pond, and spread it plentifully upon the ground, and set his vines two feet apart; the second year after this he had a plentiful crop. This was done three years ago, and the vines now cover the ground completely, no grass or weeds being present. He has done nothing to the vines since, and says that the average yield will be, the present year, two bushels of cranberries to every ten feet square. He esteems this the most profitable crop he can cultivate. He has five acres of this land which he intends to appropriate to this use.

When it is considered that fruit is now sold at not less than two dollars a bushel in our markets, this may be considered as farming to some purpose and profit. There are thousands of acres in New England which should undergo the same treatment. By such a course a great deal of wealth would be added to the community annually from the investment of a small amount of capital. Mr. Hall also stated that some cranberries in the immediate vicinity, growing naturally, had been destroyed by the frosts, while those cultivated were not affected in the least.—*Maine Farmer.*

FOOD FOR MILCH COWS.—It is said that a large milking establishment at the North of England, the cows are fed in the following manner, viz.:

ninety-one pounds of clover hay, cut or chopped; one pound of salt; one hundred and sixty-eight pounds of brewer's grain; twelve pounds of ground flaxseed. These ingredients are mixed together, and equally divided as the food of twelve cows. The hay, after being cut, is put into the mash-tub and scalded with boiling water. The other articles are then mixed with it. It is asserted that the "average yield of milk, is fourteen quarts, for a period of eight months in succession."—*Am. Veterinary Journal.*

UNSEASONABLE FUEL.

A few calculations relative to the comparative value of green and seasoned wood for fuel may serve to remind those interested, of the importance of attention to the subject.

Everybody knows that green wood is poor stuff to kindle a fire, though some contend that it will keep up as well as seasoned, if applied constantly, not suffering the heat to go down. That is, if you have a good fire to season it in, you can burn green wood as well as dry. But to the calculations:

A green stick of wood weighing 100 lbs., when seasoned, weighs only 66 lbs., or such is about the average of wood commonly used for fuel. In a seasoned stick you have all the wood—all that will support combustion—you have only got rid of 34 lbs. of water.

Now, water will not burn, and if present in fuel, it has to be converted into steam, at the expense of that fuel, and it will take five times as much heat to make steam of water, as it will, simply to bring it to a boiling point. Here is seen at once, the poor economy of burning green wood.

We have shown that about two-thirds of the weight of green wood is water—now, how many barrels of water is there in a cord of wood? There are 128 cubic feet in a cord, which allowing two-fifths for vacant space between the sticks, leaves 77 feet of solid wood, one-third of which is water—equal to over six barrels of water in every cord of green wood. The heat required to evaporate this water, would bring thirty barrels to the boiling point. And this is not the only expense. If the wood was cut properly, piled and seasoned in the woods, the cost of drawing it would be nearly one-third less. Any way you can look at it—the economy of burning green wood is more than questionable.

Every farmer should look at, and determine to keep a stock of wood on hand, sufficient to last one year, at least. And he may take another look at the difference between wood seasoned just enough, and under cover, and that which has lain out doors until all the sap-wood has become rotten, and one-half its value been lost by exposure to the weather. —*Ag. Ex.*

A THANKSGIVING DINNER.—We have a family in this State, who all dined under one roof on Thanksgiving Day, whose dinner consisted of *ten bushels* of potatoes, *eight hundred pounds* of fresh pork, roasted, *five barrels* of pudding, together with plenty of good bread and pure cold water!

In the evening, the great hall was cleared, a couple of fiddlers were found among the number, and the whole party assembled for a jollification; the lame and lazy, the halt and blind, the aged and infants, and all graduations between, were there. Many a madam galloped that night that hadn't even trotted for years before, and many an old soldier shouldered his crutch

"And showed how fields were won."

In the midst of their festivity the great bell told the hour of nine, when up went three rousing cheers for their considerate guardian, and in five minutes more, the gay wassailers were dreaming of Elysium on the advent of another Thanksgiving.

HOME PICTURE.

BY MRS. F. D. GAGE.

BEN FISHER had finished his hard day's work,
And he sat at his cottage door;
His good wife, KATE, sat by his side,
And the moonlight danced on the floor;
The moonlight danced on the cottage floor,
Her beams were clear and bright,
As when he and KATE twelve years before
Talked love in her mellow light.

BEN FISHER had never a pipe of clay,
And never a dram drank he;
So he loved at home with his wife to stay,
And they chatted right merrily;
Right merrily chatted they on, the while
Her babe slept on her breast—
While a chubby rogue with rosy smile
On his father's knee found rest.

BEN told her how fast the potatoes grew,
And the corn in the lower field,
And the wheat on the hill was grown to seed,
And promised a glorious yield:
A glorious yield in harvest time,
And his orchard was doing fair;
His sheep and stock were in their prime,
His farm all in good repair.

KATE said her garden looked beautiful,
Her fowls and her calves were fat;
That the butter that TOMMY that morning churned
Would buy him a Sunday hat;
That JENNY for Pa a new shirt had made,
And 'twas done, too, by the rule;
That NEDDY the garden could nicely spade,
And ANN was ahead at school.

BEN slowly raised his toil-worn hand,
Through his locks of greyish brown—
"I tell you, KATE, what I think," said he,
"We're the happiest folks in town."
"I know," said Kate, "that we all work hard!
Work and health go together, I've found;
For there's MRS. BELL does not work at all,
And she's sick the whole year round.

"They're worth their thousands, so people say,
But I ne'er see them happy yet;
'Twould not be me that would take their gold,
And live in a constant fret.
My humble home has a light within,
Mrs. Bell's gold could not buy—
Six healthy children, a merry heart,
And a husband's love-lit eye."

I fancied a tear was in Ben's eye,
The moon shone brighter and clearer,
I could not tell why the man should cry,
But he hitched up to KATE still nearer;
He leaned his head on her shoulder there,
And he took her hand in his—
I guess—though I looked at the moon just then—
That he left on her lips a kiss.

EXTRACTS AND REPLIES.

SWINE—SHEEP—CUT FODDER—CORN—RYE—SQUASHES.

MR. EDITOR:—I, as a subscriber of the *N. E. Farmer*, wish to have the following questions answered through the columns of that paper.

1st. Which of the three following breeds of swine are the most desirable for the farmer, the Suffolk, Essex or Berkshire?

2d. What breed of sheep are most profitable for our New England soil; having in view the object of raising both lambs and wool for the market?

3d. What is the best kind of grain to feed to sheep in winter, and how much should each receive per day?

4th. Is it economy for farmers to cut their hay and mix with meal for all their cattle?

5th. What variety of corn is best to plant for fodder?

6th. Which is most profitable to raise for winter fodder—fodder corn or millet?

7th. Is it economy to sow rye in the fall for ewes and lambs to run on in the spring?

8th. What variety of squashes is most profitable to raise for marketing in the fall?

9th. Which is most profitable to raise for stock feeding, carrots or cabbages?

Yours truly, JOHN DIMON.

Wakefield, R. I., Oct. 28, 1855.

REMARKS.—1. The Suffolk is a hearty, quiet and thrifty breed; they grow rapidly, are docile, contented and good-looking. They are well-formed, compact, short-legged, hardy animals, equal in point of value, Youatt says, to the best of the Essex, and superior in constitution, and consequently better adapted for general keep.

The Essex is a breed highly esteemed by some—the best breeds are entirely black, and they will sometimes attain the weight of nearly 500 pounds. Some prize them for their rapid growth and aptitude to lay on flesh, as well as for its excellence.

The Berkshire is also a fine breed, with something of the general shape of the Suffolk and Essex, but quite different in color and the length and appearance of the hair. The skin of the Berkshire is thin, the flesh firm and well-flavored, and the bacon very superior. The Berkshire and Suffolk have been favorably mixed.

We should not hesitate to propagate from either of the three mentioned; we are not aware that there is any decided choice in them. A neighbor of ours, CHARLES. B. CLARK, Esq., of Concord, has some of the finest Essex in the country.

2. Some of our correspondents, better acquainted with sheep husbandry than we are, may be kind enough to answer the second, third and seventh questions.

4. There is no doubt among many of our best farmers, that it is profitable to cut all the hay their stock consumes, especially now that we have cutters capable of doing it so rapidly. The saving in overhauling the manure-heap in the spring, is an item of considerable importance, as it can be done in less than half the time where no long litter is in it.

5. The white and yellow flat southern is generally sown for fodder; some say sweet corn is better. We have no experience with the latter.

6. Millet. It is exceedingly difficult to dry the corn.

8. The marrow squash takes the lead, and the Canada crook-neck comes next. There are other fine squashes, as the Custard and Acorn, but they are not usually raised extensively for market.

9. Carrots. Cabbages are valuable, and answer a good purpose for late fall feeding, but they cannot be stored away in sufficient quantity where they will keep well, to be used through the winter. Carrots, are nutritious, clean, may be compactly kept, and commend themselves in every respect.

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HOW TO FILL BLANKS IN CORN FIELDS.

Many farmers, while hoeing corn, carry a pocket of beans to drop in blank hills, which seldom get ripe before frost. I tried an experiment with turnips this season, which did well. The worms having destroyed nearly one-third of an acre of corn, I sowed broadcast, half a pound of turnip seed, (flat English) the last time hoeing, to be washed in by the first rain. The result was 210 bushels of large, nice turnips.

This land was broken up last spring; another piece in close proximity to the first, of the same soil, but plowed in the fall, manuring and after treatment, the same in both cases, did not have one hill injured by the worm. ALEX. PRINGLE.

Ryegate, Vt., Nov., 1855.

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ABOUT BEES.

I wish to inquire through the columns of your invaluable paper, as to the management of bees, the kind of hive best adapted to their wants, and the best time to purchase bees, fall or spring?

Ludlow, Vt., 1855. SUBSCRIBER.

REMARKS.—It would require a long story to answer all your inquiries. The best thing you can do is to purchase *Langstroth's* book *On the Hive and the Honey Bee*, and there you will find every direction you need. The price is one dollar, and may be made to answer for a neighborhood, if it is desirable.

—

POISON IVY.

R. G. B. recently inquired for an effectual method of destroying poison ivy. I have done it by sprinkling salt upon the ivy; the cattle and sheep, in their eagerness for the salt, completely destroyed it, so that it never again made its appearance.

I wish to state another fact in regard to poison ivy, which, if more generally known, would prevent much suffering, and save valuable time in the haying season. It is this—that the leaf of the white pine is a perfect antidote; let any person who has been exposed to the poison ivy chew a few leaves of the white pine, swallowing the juice, and it will destroy the effects of the poison.

McIndoes Falls, Vt., 1855. J. H. CURRIER.

GREAT YIELD OF POTATOES.

MESSRS. EDITORS:—I have noticed much has been said in some of the papers of late, in regard to large potatoes, raised in various parts of Massachusetts, the present season.

Although not living in so productive a portion of Massachusetts, as concerns agricultural interests, as many, yet we can raise, and do, many potatoes, and some large heavy ones even here, amongst the hills and stones of western Massachsetts.

Let me give you the weight of thirteen potatoes of the "Jenny Lind," or California variety, raised by Mr. Alvan Cross, of this town; weight of the thirteen, 18 lbs. These thirteen are but a fair specimen of many bushels raised by him. These may be considered "whoppers," but Mr. Friend Knowlton has raised *thirteen that weigh 21 lbs.* What may those be considered?

Ashfield, Nov. 19, 1855. JOSEPH BLAKE.

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NEW STYLE CARRIAGE.

MR. EDITOR:—I have a new pattern for an extension family carriage, either on wheels or runners, and as I presume there are many of your readers, like myself, in want of an extension carriage, I beg leave to give them a short description of it through your columns.

The perches are screws, and on turning these screws, by means of a crank, the body and wheels are extended so as to form a two-seated carriage. When it is retracted, it is so constructed that one seat fits exactly into the other, forming a short carriage, occupying the space of only one seat. Numerous competent judges have examined this pattern, and pronounce it the most convenient family carriage ever offered to the public. Any persons in want of a convenient carriage are requested to examine for themselves.

Patented by the subscriber in August last.

B. W. GAY.

New London, N. H., Nov. 19, 1855.

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RUSSET SWEET APPLE.

MR. BROWN:—I send you two kinds of apples—are they either of them worthy of cultivation? The red ones I call the African Prince—is that the true name? The russets are seedlings that came up spontaneously. We think them excellent, especially for baking.

Weston, 1855. G. N. CHENEY.

REMARKS.—The russet sent is an excellent apple, worthy of cultivation on every farm. It is known by several names, the russet sweet, the York russet and the golden russet. We prefer Russet Sweet. The red apples we do not know. There is nothing in their flavor to recommend them.

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MILK AND BUTTER.

"Four quarts of milk in October, and six quarts in June and July, will make a pound of butter, in case you procure the right kind of stock." *In case you procure the right kind of stock*—here is the rule. We remember to have been told, when young, that it was easy to catch pigeons, "when you could lay salt upon their tails, and make it stick there." We suspect this rule about making butter is something of the like character. What think you, Mr. Editor,—your wife makes butter sometimes, does she not?—if not, the wives of your neighbors do—and they understand this matter, full better than any Editor—be they never so experienced.

REMARKS.—Speaking of "our wife," Mr. Star, reminds us of a remark of hers quite recently upon reading a statement in some agricultural paper similar to the one you have quoted above. Said she, "I have made a good deal of butter with the milk of excellent cows, and my experience is that double the quantity stated is required as a general rule." Extravagant assertions like the one quoted by our correspondent, either act as discouragements to the farmer, or fill his mind with doubts as to the utility of agricultural papers. We do not believe that any stock exists, the cows of which will yield milk that will produce a pound of butter from four quarts, or even six quarts, as a general thing. If these products are only occasional, then they should be stated as exceptions to the general rule. This is one of those agricultural flams which bring discredit upon the exertions of all who are laboring to advance its interests.

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POISON IVY ON WET LAND.

MR. FARMER:—If you can tell me of any effectual method of destroying poison ivy on land that is too wet to plow, you will much oblige,

Acworth, N. H., Oct. 15, 1855. R. G. B.

REMARKS.—Who knows how it should be done, and will inform us?

For the New England Farmer.

HOW TO GET FRUIT TREES TO YOUR LIKING.

MR. EDITOR:—In the fall, October or November, take a branch of an apple or pear tree, such as suits your taste, take off down to the third year's growth, cut it smooth and rub it on a red-hot iron so as to scorch and shut the pores of the wood thoroughly; then bury in the ground all but the last year's growth. If placed in good ground, and well taken care of, you will have fruit in five or six years. I have sometimes dipped the lower end in melted rosin, but think burning preferable. I have a tree near my door that is nine feet high and well proportioned, that I took from a graft four years ago; to this rosin was applied, and whatever sprouts sprung up the next summer were bent down and became roots. We can get fruit considerably quicker this way than from seeds, and we know what we have growing, and when grown the whole tree is of the same kind, and whatever sprouts come from the roots in after years can be transplanted without grafting. In case of a drought the first year they should be watered.

TO MAKE MINCE PIES WITHOUT MEAT.

Prepare your pie-crust and apples in the usual way: when seasoned, and in the pie-pans, fill to the top of the apples with custard prepared the same as for custard pie; then put on the top crust and bake; you will have a good imitation of mince-pie in appearance, but in flavor far preferable, although the taste is similar.

State Line, Nov. 6. JASON BECKWITH.

STALL-FEEDING OF SHEEP.

THE PROFITS OF STALL FEEDING MERINOS AND SAXONS FOR THE BUTCHER.

Mr. J. W. Colburne, of Springfield, Vermont, writes to the editor of *The Country Gentleman*, at Albany, New York, that he, being stimulated by what he had read in that paper of what one of his neighbors had done in the way of stall feeding, had tried his hand at it this past winter, and had kept an account of the results.

In reading the items of the cost of the feed given by Mr. Colburne to his sheep, it will be seen that he reckons the cost of his hay at $10 per ton, and his corn at nearly double what it is worth in this State under ordinary circumstances. But we regard the fact of these fine-wooled sheep being brought to market in such fine condition, as proving that they may be kept with profit for their mutton as well as for their wool, and showing that there is not the least excuse for any farmer in this State to raise a poor coarse-wooled sheep, unless he is so careless and unambitious that he is willing to let every body else get ahead of him.

This intelligent Vermont farmer says: "I culled one cow from my limited number of four, dried her 1st September; fed with pumpkins and short grass until 20th November; then with corn-stalks, hay, and corn in the ear (ground) until the 22d of March, when I sold her to go to Brighton market, with the following results:

Value of cow on 1st September	$15,00
Grass $2, three cart-loads pumpkins, $2	4,00
Hay and other coarse feed through the winter	7,00
Corn with the expense of carrying three miles to mill	24,00
Total cost of cow when fatted	$50,00

Estimated to weigh 1,000 lbs.; sale on foot at the barn, $72; profits, $22.

Her blood was three-fourths Native, one-fourth Durham. She was large, and very fat; worth at Brighton, $7,50 per 100 lbs., which left $3 for drift, by railroad—just a fair compensation.

I also stall-fed 123 wethers, all of my own raising, four years old last May and June—a cross between the full-blood Spanish Merino and Saxony; very fine quality of fleece—a race which all wool-growers know never attain to a large size. I was offered $2 per head for them in November, and my neighbors considered it a very generous offer: it was all they could have brought at that time. I commenced feeding them with corn unground on the 24th of November, and followed it without change (except in quantity) until the 29th of March, when they went to Cambridge market, with the following results:

Sale 123 head at $6,60 per head		$811,80
Value of sheep in November	$246,00	
20 tons English hay of good quality	200,00	
200 bushels of corn at 80c (the market price)	160,00	
Cost of getting them to market by railroad	44,28	
		650,28
Profit		$161,52

Or a fraction over $1,31 per head.

It is a satisfaction to the grower to be enabled to say, that these sheep, considering the superiority of blood for wool-growing purposes only, the fineness in texture of fleece, and the number raised and fatted in one flock, were deemed by the sheep dealers at Cambridge, equal if not superior to any ever taken to that market, from any one flock in Vermont.

And now a word as to the manner of feeding. My sheep and cattle yards have open sheds, with a southern or eastern exposure. Cattle are stabled nights, and mostly stormy days; sheep go out and in at their pleasure; pure aqueduct water in each yard, with a box of St. Ubes' salt constantly supplied, which I consider quite as essential in winter as summer; yards and sheds kept dry by straw and other coarse litter. A large stable connected with my sheep-yard enables me to shut them off when putting hay into their racks, or grain into their troughs, so that they all go to their feed together and share as equally as possible. I commenced this flock of wethers with twenty quarts of corn per day, and from time to time increased gradually as they would bear it, without producing the scours, until they would take 70 quarts per day, with as much good hay as they would eat without waste. It will not pay the cost and trouble to grind any kind of grain for sheep, though it always should be done for cattle or hogs. No whole grain passes the stomach of a sheep undigested. The ewes belonging to this flock of wethers (those of the same year's growth) were sold when two years old to go to Western New York, where I have no doubt they will contribute to the improvement in fine wool.

FORTY DOLLAR PEAR TREE.—Mr. C. A. Nealey, formerly a resident of this town, but now a farmer Eddington, in Penobscot County, hauled into the village last Tuesday morning, forty bushels of pears, and in one hour retailed all of them from his wagon at two dollars a bushel. The pears were of a superior quality, and bought expressly for making preserves. Mr. N. informed us that he gathered twenty bushels of the lot from one tree. We should think that the farmers in this region might take the hint—it costs but a trifle to grow the trees.—*Ellsworth American.*

BOYS' DEPARTMENT.

LAWS AND RULES.

[A few weeks since we gave notice of a little 32mo book, "A Public School Teacher's Letter to a Pupil." The following remarks in this letter, on the subject of rules and laws, we commend to the attention of our young readers:—]

Now, young friend, in order that the school may be thus pleasant and useful, there are various duties for *you* to perform. I will mention two or three of the more important ones. And

1. You must *carefully regard and cheerfully obey all the rules of the school.*

You know there are, in every family, school, society, town, State and nation, certain rules and laws to regulate the conduct of the members. There can be no happy family, school or community, without such rules and regulations. And these rules must be strictly obeyed to be of any service. To secure this obedience, there are always certain penalties or punishments connected with disobedience.

We have certain regulations and rules in our school, which must be cheerfully complied with, or the school can be neither pleasant nor useful. They are regarded as essential to the prosperity of the school. They are all designed for the good of each scholar and the whole school. They were adopted

for *your* good as much as the good of any scholar. They leave each one to enjoy just as much liberty and freedom as will not interfere with the interests of the whole. Good laws were never designed to interfere with the rights or happiness of any one, only so far as the highest good of the whole requires. They are intended to protect the rights and happiness of all. These laws and penalties are always *friends* to the good and obedient, but a terror to the lawless and wicked.

Punishment is no part of keeping school, only so far as it is necessary to maintain the rules of the school. If these rules—which, we have seen, are essential to the peace and prosperity of a school—are all complied with, there will never be any such thing among us as punishment.

"Well, my son," said a gentleman to a boy six or seven years old, "do you go to school?"

"Yes, sir, I have been three days, and I haven't been punished once."

And he looked as though he had accomplished a feat that was worthy of his boasting. And why should he be punished? That is no object of going to school, any more than being fined or sent to prison is an object of being a farmer or a storekeeper. What would you think to hear a boy say, he had been on a farm or in a store three days and had not been arrested by an officer once? If he has not been breaking any of the laws of the community, why should he be arrested? And if he should break any of those laws and be punished, the punishment would not be for working on the farm or in the store, but for *crime*. And so punishment in school is for crime—for the violation of rules—not for going to school.

You should remember, young friend, that we must *always* be under laws—laws that will protect us from injury and injustice, and that will also prevent us from doing injury or any injustice to others. If you learn to comply cheerfully with the rules of school, you will find it easy hereafter to comply with the laws of the society, under which you must ever live.

The laws of the land and the rules of school are much like the fences that enclose the public ways. If there is a good road, you never find any inconvenience from the fences that enclose it. You never complain of them as abridging your liberty, and interfering with your rights, and wish them out of the way. When you drive the cows to pasture, you find these same fences of great service, saving you many a run after your straying drove, and also preventing other creatures from coming in from the fields to annoy you.

LADIES' DEPARTMENT.

DOMESTIC RECIPES.

BUCKWHEAT PORRIDGE.—Take a quart of rich milk, and after boiling it hard, stir in as much buckwheat meal as will make it of the consistency of thick mush, adding one teaspoonful of salt and a tablespoonful of fresh butter. In five minutes after it is thick enough to take from the fire. If the milk is boiling hard and continues to boil while the meal is being stirred in, very little more cooking will be required. It should be placed on the table *hot*, and eaten with butter and sugar, or with molasses and butter. This is sometimes called a five minute pudding; it is excellent for children as a plain dessert, or for supper. Some add a seasoning of ginger or grated nutmeg before sending it to the table.

INDIAN MUFFINS.—A pint and a half of yellow Indian meal sifted. A handful of wheat flour. A quarter of a pound of fresh butter. A quart of milk. Four fresh eggs. A very small teaspoonful of salt. Put the milk into a saucepan. Cut the butter into it. Set it over the fire and warm it until the butter is very soft, but not until it melts. Then take it off, stir it well till all is mixed, and set it away to cool. Beat four eggs very light; and when the milk is cold, stir them into it alternately with the meal, a little at a time of each. Add the salt. Beat the whole very hard after it is all mixed. Then butter some muffin-rings on the inside. Set them in a hot oven, or on a heated griddle; pour some of the batter into each; and bake the muffins well. Send them hot to table, continuing to bake while a fresh supply is wanted. Pull them open with your fingers, and eat them with butter, to which you may add molasses or honey.

HOW TO MAKE NO-MATTERS.—This is an article of food which has for many years been confined to the descendants of a single family of this town. Its excellence will commend it to the attention of those housewives who wish to make a good display of culinary skill upon their tables, at the same time having a due regard to economy. The lady who furnishes the recipe has given frequent opportunities of tasting their delicious flavor; and if any are inquisitive, perhaps she might be induced to inform them how the cakes obtained their homely name.

"To three tea-cupfuls of buttermilk add three table-spoonfuls of rich cream, and a small quantity of sugar. Stir in flour until it is of a consistency of paste for doughnuts. Roll out size of a large breakfast plate, and fry in lard to a rich brown color.

"As each cake comes from the fire, cover with apple-sauce made from tart apples sweetened to taste, and spiced with nutmeg or cinnamon, and continue the process till the plate is well heaped."
—*Oxford Democrat.*

NURSERY PUDDING.—Slice some white bread, without crust; pour scalding milk on it; let it stand until well soaked, then beat it well with four eggs, a little sugar and grated nutmeg. Bake in small cups half filled.

USE OF SALT IN COOKING VEGETABLES.—Here is something everybody ought to have known long ago, and that everybody should now read and remember:

"If one portion of vegetables be boiled in pure distilled or rain water, and another in water to which a little salt has been added, a decided difference is perceptible in the tenderness of the two. Vegetables boiled in pure water are vastly inferior. This inferiority may go so far, in the case of onions, that they are almost entirely destitute of either taste or color, though when cooked in salted water, in addition to the pleasant salt taste, a peculiar sweetness and a strong aroma. They also contain more soluble matter than when cooked in pure water. Water which contains 1-420th of its weight of salt is far better for cooking vegetables than pure water, because the salt hinders the solution and evaporation of the soluble and flavoring principles of the vegetables.—*Scientific American.*